CITY OF FRESNO NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION	Filed with the FRESNO COUNTY CLERK 2220 Tulare Street, Fresno, CA 93721
ENVIRONMENTAL ASSESSMENT FOR PLAN AMENDMENT APPLICATION NO. P18-01089, PRE-ZONE APPLICATION NO. P18-01089, VESTING TENTATIVE TRACT MAP NO. 6237/UGM	
APPLICANT: Jeffrey Roberts Assemi Group, Inc. 1396 West Herndon Avenue Fresno, CA 93711	
PROJECT LOCATION: Located on the southeast corner of the West Dakota Avenue alignment and North Grantland Avenue in the City and County of Fresno, California (See Exhibit A - Vicinity Map) APNs: 512-141-33, -47 Site Latitude: 36°47'4" N & Site Longitude: 119°54'50" W Mount Diablo Base & Meridian, Township 13S, Range 19E, Section 21	

The full Initial Study and the Fresno General Plan Master Environmental Impact Report (MEIR) are on file in the Planning and Development Department, Fresno City Hall, 3rd Floor, Room 3043, 2600 Fresno Street, Fresno, CA 93721.

PROJECT DESCRIPTION:

Jeffrey Roberts of Assemi Group, Inc., on behalf of Granville Homes, has filed Plan Amendment Application No. P18-01089, Pre-zone Application No. P18-01089, Vesting Tentative Tract Map No. T-6237/UGM pertaining to ±26.92 acres of properties located on the southwest corner of West Dakota and North Grantland Avenues. Plan Amendment Application No. P18-01089 proposes to amend the Fresno General Plan and West Area Community Plan land use designations from Residential – Medium and Residential – High Densities to Residential – Medium Low Density. Pre-zone Application No. P18-01089 proposes to amend the Official Zone Map to reclassify the subject properties from the

RR (*Rural Residential – Fresno County*) zone district to the RS-4/UGM (*Residential Single-Family, Medium Low Density/Urban Growth Management*) zone district. Vesting Tentative Tract Map No. 6237/UGM is a request to subdivide ±26.92 acres of the subject properties into a 116-lot single-family residential development.

The project will also require dedications for public street rights-of-way and utility easements as well as the construction of public facilities and infrastructure in accordance with the standards, specifications, and policies of the City of Fresno in order to facilitate the future proposed development of the subject property.

The subject property is located within the boundaries of the Fresno General Plan and West Area Community Plan.

The City of Fresno has prepared an Initial Study of the above-described project and proposes to adopt a Mitigated Negative Declaration. The environmental analysis contained in the Initial Study is tiered from the MEIR State Clearinghouse No. 2012111015 prepared for the Fresno General Plan pursuant to CEQA Guidelines § 15152 and incorporates the MEIR by reference pursuant to CEQA Guidelines § 15150.

Pursuant to the California Public Resources Code (PRC) §§ 21093 and 21094 and California Environmental Quality Act (CEQA) Guidelines §§ 15070 to 15075, 15150, and 15152, this project has been evaluated with respect to each item on the attached Appendix G/Initial Study Checklist to determine whether this project may cause any additional significant effect on the environment, which was not previously examined in the MEIR. After conducting a review of the adequacy of the MEIR pursuant to PRC § 21157.6(b)(1) and CEQA Guidelines §§ 15151 and 15179(b), the Planning and Development Department, as lead agency, finds that no substantial changes have occurred with respect to the circumstances under which the MEIR was certified and that no new information, which was not known and could not have been known at the time that the MEIR was certified as complete, has become available.

The completed Appendix G/Initial Study Checklist, its associated narrative, technical studies and proposed mitigation measures reflect applicable comments of responsible and trustee agencies and research and analyses conducted to examine the interrelationship between the proposed project and the physical environment. The information contained in the project application and its related environmental assessment application, responses to requests for comment, checklist, initial study narrative, and any attachments thereto, combine to form a record indicating that an Initial Study has been completed in compliance with the State CEQA Guidelines and the CEQA.

All new development activity and many non-physical projects contribute directly or indirectly toward cumulative impacts on the physical environment. It has been determined that the incremental effect contributed by this project toward cumulative impacts is not considered substantial or significant in itself, and/or that cumulative impacts accruing from this project may be mitigated to less than significant with application of feasible mitigation measures.

Based upon the evaluation guided by the Appendix G/Initial Study Checklist, it was determined that

there are foreseeable impacts from the Project that are additional to those identified in the MEIR, and/or impacts which require mitigation measures not included in the MEIR Mitigation Measures Checklist.

For some categories of potential impacts, the checklist may indicate that a specific adverse environmental effect has been identified which is of sufficient magnitude to be of concern. Such an effect may be inherent in the nature and magnitude of the project, or may be related to the design and characteristics of the individual project. Effects so rated are not sufficient in themselves to require the preparation of an Environmental Impact Report, and have been mitigated to the extent feasible. With the project specific mitigation imposed, there is no substantial evidence in the record that this project may have additional significant, direct, indirect or cumulative effects on the environment that are significant and that were not identified and analyzed in the MEIR. Both the MEIR Mitigation Measures Checklist and the Project Specific Mitigation Measures Checklist will be imposed on this project.

The project is not located on a site which is included on any of the lists enumerated under § 65962.5 of the Government Code including, but not limited to, lists of hazardous waste facilities, land designated as hazardous waste property, hazardous waste disposal sites and others, and the information in the Hazardous Waste and Substances Statement required under subdivision (f) of that Section.

The Initial Study has concluded that the proposed project will not result in any adverse effects, which fall within the "Mandatory Findings of Significance" contained in § 15065 of the State CEQA Guidelines. The finding is, therefore, made that the proposed project will not have a significant adverse effect on the environment.

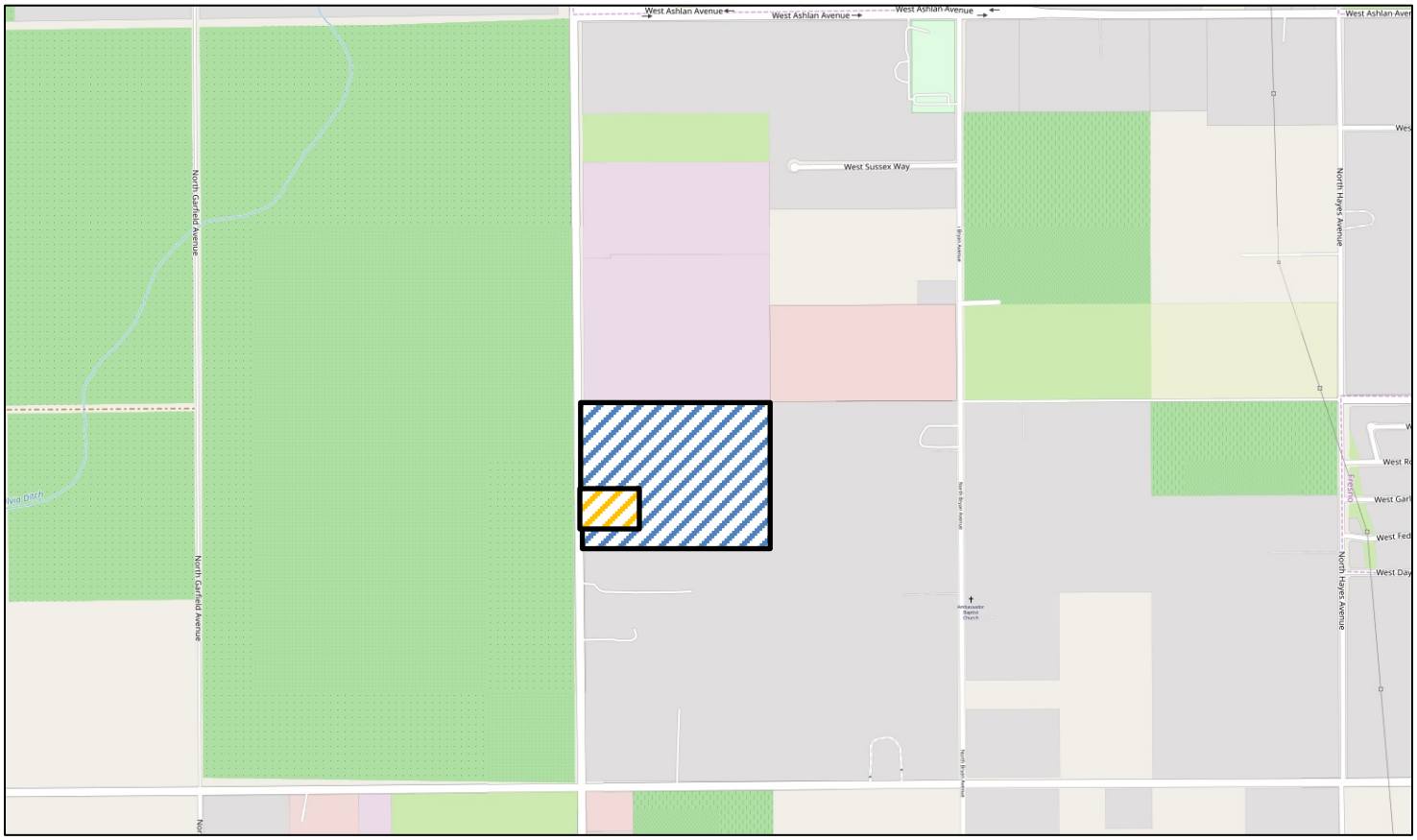
Public notice has been provided regarding staff's finding in the manner prescribed by § 15072 of the CEQA Guidelines and by § 21092 of the PRC Code (CEQA provisions).

Additional information on the proposed project, including the MEIR proposed environmental finding of a Mitigated Negative Declaration and the Initial Study may be obtained from the Planning and Development Department, Fresno City Hall, 2600 Fresno Street, 3rd Floor Fresno, Room 3043, California 93721-3604. Please contact Rob Holt at (559) 621-8056 or via email at Robert.Holt@fresno.gov for more information.

ANY INTERESTED PERSON may comment on the proposed environmental finding. Comments must be in writing and must state (1) the commentor's name and address; (2) the commentor's interest in, or relationship to, the project; (3) the environmental determination being commented upon; and (4) the specific reason(s) why the proposed environmental determination should or should not be made. Any comments may be submitted at any time between the publication date of this notice and close of business on June 8, 2020. Please direct comments to Rob Holt, Planner III, City of Fresno Planning and Development Department, City Hall, 2600 Fresno Street, Room 3043, Fresno, California, 93721-3604; or by email to Robert.Holt@fresno.gov.

INITIAL STUDY PREPARED BY: Rob Holt, Planner III	SUBMITTED BY:  Israel Trejo, Supervising Planner CITY OF FRESNO PLANNING AND DEVELOPMENT
DATE: May 15, 2020	
Attachments: Exhibit A – Vicinity Map Exhibit B – Appendix G/Initial Study Checklist Exhibit C – MEIR Mitigation Measures Checklist Exhibit D – Project Specific Mitigation Measures Checklist	

VICINITY MAP



LEGEND

Subject Property
±26.92 net acres

Neighbor Property
Not part of Subdivision
±1.02 net acres

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APPENDIX G/INITIAL STUDY FOR A MITIGATED NEGATIVE DECLARATION

Environmental Checklist Form for:
EA No. P18-01089/T-6237

1.	**Project title:** Environmental Assessment Application No. P18-01089/T-6237
2.	**Lead agency name and address:** City of Fresno Planning and Development Department 2600 Fresno Street Fresno, CA 93721
3.	**Contact person and phone number:** *Rob Holt*, *Planner III* City of Fresno Planning and Development Department (559) 621-8056
4.	**Project location:** *Southeast corner of North Grantland Avenue and the West Dakota Avenue alignment* (APNs: 512-141-33 and 512-141-47)
5.	**Project sponsor's name and address:** *Jeffrey Roberts* *Assemi Group, Inc.* *1396 West Herndon Avenue* *Fresno, CA 93711*
6.	**General & Community plan land use designation:** Existing: Residential – Medium and High Density Proposed: Residential – Medium Low Density
7.	**Zoning:** Current: RR (Rural Residential – County)
8.	**Description of project:** Environmental Assessment No. P18-01089/T-6237 was filed by ***Jeff Roberts of Assemi Group, Inc.***, on behalf of ***Granville Homes***, pertaining to ±26.92 net acres two vacant properties on the southeast corner of North Grantland Avenue and the West Dakota Avenue alignment. Vesting Tentative Tract Map No. 6237/UGM proposes to subdivide the properties into a 116-lot conventional single-family

residential subdivision at a density of 4.31 dwelling units per acre. The subject properties are located within the boundaries of the Fresno General Plan and the Roosevelt Community Plan; both plans designate the subject properties for Residential – Medium (12-16 du/ac) and High Density (30-45 du/ac) planned land uses. The applicant is proposing to amend the existing Fresno General Plan land use designations for the subject properties to the Medium Low Density planned land use designation (3.5-6 du/ac) and pre-zone the subject properties to the RS-4/UGM (Residential Single-Family – Medium Low Density) zone district.

9. **Surrounding land uses and setting:**

	Planned Land Use	Existing Zoning	Existing Land Use
North	Open Space – Community Park / Commercial – Community (Dual Use)	RR (Rural Residential – County)	Light Industrial/Vacant Land
East	Residential – Urban Neighborhood	RR (Rural Residential – County)	Rural Residential/Vacant Land
South	Residential – High Density	RR (Rural Residential – County)	Rural Residential/Vacant Land
West	Residential – Medium Density	RS-5/UGM/cz (Residential Single-Family – Medium Density/Urban Growth Management/conditions of zoning)	Open Space

10. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):**

Planning and Development Department, Building and Safety Services Division, Department of Public Works, Department of Public Utilities, Fire Department, Fresno Metropolitan Flood Control District, San Joaquin Valley Air Pollution Control District, County of Fresno Department of Community Health, and County of Fresno Department of Public Works and Planning.

11. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code (PRC) Section 21080.3.1? If so, has consultation begun?**

The State requires lead agencies to consider the potential effects of proposed projects and consult with California Native American tribes during the local planning process for the purpose of protecting Traditional Tribal Cultural Resources through

	the California Environmental Quality Act (CEQA) Guidelines. Pursuant to PRC Section 21080.3.1, the lead agency shall begin consultation with the California Native American tribe that is traditionally and culturally affiliated with the geographical area of the proposed project. Such significant cultural resources are either sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe which is either on or eligible for inclusion in the California Historic Register or local historic register, or, the lead agency, at its discretion, and support by substantial evidence, choose to treat the resources as a Tribal Cultural Resources (PRC Section 21074(a)(1-2)). According to the most recent census data, California is home to 109 currently recognized Indian tribes. Tribes in California currently have nearly 100 separate reservations or Rancherias. Fresno County has a number of Rancherias such as Table Mountain Rancheria, Millerton Rancheria, Big Sandy Rancheria, Cold Springs Rancheria, and Squaw Valley Rancheria. These Rancherias are not located within the city limits. Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See PRC Section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per PRC Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that PRC Section 21082.3(c) contains provisions specific to confidentiality. Pursuant to Senate Bill 18 (SB 18), Native American tribes traditionally and culturally affiliated with the project area were invited to consult regarding the project based on a list of contacts provided by the Native American Heritage Commission (NAHC). The City of Fresno mailed notices of the proposed project to each of these tribes on October 15, 2018 which included the required 90-day time period for tribes to request consultation, which ended on January 13, 2019. Pursuant to Assembly Bill 52 (AB 52), the Table Mountain Rancheria and the Dumna Wo-Wah Tribal Government were invited to consult under AB 52. The City of Fresno mailed notices of the proposed project to each of these tribes on October 15, 2018 which included the required 30-day time period for tribes to request consultation, which ended on November 14, 2018.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics

☐ Mineral Resources

☐ Agriculture and Forestry Resources
☐ Air Quality
☐ Biological Resources
☐ Cultural Resources
☐ Energy
☐ Geology and Soils
☐ Greenhouse Gas Emissions
☐ Hazards and Hazardous Materials
☐ Hydrology and Water Quality
☐ Land Use and Planning
☐ Noise
☐ Population & Housing
☐ Public Services
☐ Recreation
☐ Transportation
☐ Tribal Cultural Resources
☐ Utilities and Service Systems
☐ Wildfire
☐ Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

___	I find that the proposed project could not have a significant effect on the environment. A NEGATIVE DECLARATION will be prepared.
_X_	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
___	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
___	I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
___	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Rob Holt, Planner III 05/15/2020
Planner Name, Title Date

EVALUATION OF ADDITIONAL ENVIRONMENTAL IMPACTS NOT ASSESSED IN THE MASTER ENVIRONMENTAL IMPACT REPORT (MEIR):

1. For purposes of this Initial Study, the following answers have the corresponding meanings:

   a. "No Impact" means the subsequent project will not cause any additional significant effect related to the threshold under consideration which was not previously examined in the MEIR.

   b. "Less Than Significant Impact" means there is an impact related to the threshold under consideration that was not previously examined in the MEIR, but that impact is less than significant;

   c. "Less Than Significant with Mitigation Incorporation" means there is a potentially significant impact related to the threshold under consideration that was not previously examined in the MEIR, however, with the mitigation incorporated into the project, the impact is less than significant.

   d. "Potentially Significant Impact" means there is an additional potentially significant effect related to the threshold under consideration that was not previously examined in the MEIR.

2. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

3. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

4. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the

determination is made, an EIR is required.

5. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).

6. Earlier analyses may be used where, pursuant to the tiering, program EIR or MEIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

    a. Earlier Analysis Used. Identify and state where they are available for review.

    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in the MEIR or another earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

7. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

8. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

9. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

10. The explanation of each issue should identify:

    a. The significance criteria or threshold, if any, used to evaluate each question; and

    b. The mitigation measure identified, if any, to reduce the impact to less than significance.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS – Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock out-croppings, and historic buildings within a state scenic highway?				X
c) In nonurbanized areas, substantially degrade the existing visual character or quality of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?		X		

DISCUSSION

a) Have a substantial adverse effect on a scenic vista?

Less than Significant Impact. A scenic vista is generally defined as a public vantage point with an expansive view of a significant landscape feature. The Sierra Nevada Mountains are the only natural and visual resource in the Project area. Views of these distant mountains are available only during clear conditions due to continuous poor air quality in the Central San Joaquin Valley. Distant views of the Sierra Nevada Mountains would largely be unaffected by the development of the project because of the nature of

the project, distance and limited visibility of these features. The City of Fresno does not identify views of these features as required to be protected.

The project site is within a rural residential area just outside of Fresno City Limits. There are no scenic vistas or other protected scenic resources on or near the site. Therefore, the proposed project has a *less than significant impact* on scenic vistas.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. According to the California Department of Transportation mapping of State Scenic Highways,[1] the County of Fresno has one officially designated State Scenic Highway located along State Route 180, east of Fresno. Three eligible State Scenic Highways are also located within the County of Fresno, the nearest is located along State Route 168 east of the City of Clovis. Since there are no eligible or officially designated State Scenic Highways within the immediate vicinity of the project site, the project would not impact a designated state scenic highway. Furthermore, the eligibility of the three State Scenic Highways, scenic resources located within the highway segments or its view-shed would not be impacted by the proposed project. Therefore, *no impact* on scenic resources within a state scenic highway would occur as a result of the proposed project.

c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less than Significant Impact. The proposed project will alter the visual character of the project site from agricultural land to single-family residential development. Although this land use conversion could be perceived by some as a negative aesthetic impact in comparison with the project site's current appearance, based upon the subjective nature of aesthetics, the City does not anticipate that the development of the proposed project with single-family houses will create a visually degraded character or quality to the project site or to the properties near and around the project site.

Upon approval of the project, the design will be subject to the City's Design Guidelines adopted for the City's General Plan which apply to site layout, building design, landscaping, interior street design, lighting, parking and signage. Detailed architectural plans, color palettes and building materials, as well as landscaping plans will be submitted by the project developer to the City of Fresno Planning and Development Department. The plans will be required prior to issuance of any building permits.

[1] California Department of Transportation mapping of State Scenic Highways, https://dot.ca.gov/-/media/dot-media/programs/design/documents/od-county-scenic-hwys-2015-a11y.pdf (accessed on 03/09/2020).

Outlots for landscape purposes will run along the frontage of the development and additional landscaping design will accompany the aforementioned open spaces and bicycle/pedestrian use trail. The improvements, such as those proposed by the project, are typical of large City urban areas and are generally expected from residents of the City. These improvements would not substantially degrade the visual character of the area and would not diminish the visual quality of the area, as they would be consistent with the existing visual setting and development patterns in the area. The project itself is not visually imposing against the scale of the existing development and nature of the surrounding area.

Therefore, the project would have *less than significant impacts* on the visual character of the area.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less than Significant Impact with Mitigation Incorporated. The project site currently has no on-site sources of lighting as it is being used for agricultural purposes. The project will introduce new lighting that will be typical of residential tract developments, such as streetlights and an increase in residential and vehicle lights. Additional night lighting sources on the project site, especially any unshielded light, could result in spillover light that could impact surrounding adjacent rural residential uses to the south and east. This would create new sources of light that could potentially have a significant impact on nighttime light levels in the area. During the entitlement process, City of Fresno staff will ensure that lights are located in areas that will minimize light sources to the neighboring properties. Further, Mitigation Measures AES-1 through AES-3 from the General Plan MEIR require lighting systems to be shielded to direct light to ground surfaces and orient light away from adjacent properties. In addition, AES-5 requires use of non-reflective building materials to reduce glare impacts.

In addition, a condition of approval will require that lighting, where provided for public streets, shall be hooded and so arranged and controlled so as not to cause a nuisance either to traffic or to the living environment. The amount of light shall be provided according to the standards of the Department of Public Works. As a result, the project will implement the necessary mitigation measures (see below) and will have a *less than significant impact with mitigation incorporated* on nighttime views in the area.

Mitigation Measures (MEIR SCH No. 2012111015)

GP MEIR Mitigation Measure AES-1: Lighting systems for street and parking areas shall include shields to direct light to the roadway surfaces and parking areas. Vertical shields on the light fixtures shall also be used to direct light away from adjacent light sensitive land uses such as residences.

GP MEIR Mitigation Measure AES-2: Lighting systems for public facilities such as active play areas shall provide adequate illumination for the activity; however, low intensity light fixtures and shields shall be used to minimize spillover light onto adjacent properties.

GP MEIR Mitigation Measure AES-3: Lighting systems for non-residential uses, not including public facilities, shall provide shields on the light fixtures and orient the lighting system away from adjacent properties. Low intensity light fixtures shall also be used if excessive spillover light onto adjacent properties will occur.

GP MEIR Mitigation Measure AES-4: Lighting systems for freestanding signs shall not exceed 100 foot Lamberts (FT-L) when adjacent to streets which have an average light intensity of less than 2.0 horizontal footcandles and shall not exceed 500 FT-L when adjacent to streets which have an average light intensity of 2.0 horizontal footcandles or greater.

GP MEIR Mitigation Measure AES-5: Materials used on building facades shall be non-reflective.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FORESTRY RESOURCES – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farm-land), as shown on the maps prepared pursuant to the Farmland Mapping and Monito-ring Program of the California Resources Agency, to non-agricultural use?			X	

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?			X	

DISCUSSION

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Less than Significant Impact with Mitigation Incorporation. The project will result in the loss of approximately 27 acres of active agricultural land that will be converted to residential housing. However, the site is within the City's Sphere of Influence boundary and has been pre-designated for residential use by the City of Fresno and the City's General Plan has designated the site for urban development. There are no Williamson Act parcels on the site. According to the California Department of Conservation, Division of Land Resource Protection's Farmland Mapping and Monitoring Program, the project

site is classified as "Unique Farmland.[2]

The EIR for the City of Fresno General Plan found the conversion of applicable agricultural land, including the project site, to urban uses to be a significant and unavoidable impact. As part of adopting the City General Plan, the Fresno City Council adopted findings of fact and a statement of overriding considerations that indicated urban development within the City's Sphere of Influence was of greater benefit to the community than preserving agricultural land within City limits. Upon annexation, this greater benefit would be applied to the proposed project site as well. Although conversion of the project area to an urban use would reflect the land use assumptions contained in the City of Fresno General Plan (i.e. conversion from farmland to urban uses), farmland is an important resource to the region. As such, Mitigation Measure AG-1 is included to reduce potential conflicts between urban and agricultural uses. This measure includes a Right-to-Farm Covenant and will ensure that agricultural operations in the area can be maintained. Because the loss of farmland was already considered by the City's General Plan Master EIR and because the project does not result in impacts beyond what was evaluated in the Master EIR, the impact is considered to be *less than significant*. However, as previously mentioned, Mitigation Measure AG-1 will reduce conflicts between urban and agricultural uses.

b) Conflict with existing zoning for agricultural use or a Williamson Act contract?

No Impact. The project site is currently located in the County of Fresno, with a RR (*Rural Residential*) zone district. Although the property is currently being used for agricultural purposes, the pre-zone to the RS-4 (*Residential Single-Family – Medium Low Density*) will not conflict with existing zoning as the existing zoning is not specifically for agricultural uses. The project site is not subject to a Williamson Act contract. Therefore, development of the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and the proposed project would have *no impact*.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. The City of Fresno General Plan found that there is an absence of timber, forest land, and timber harvesting industries within the Planning Area providing no land use classifications for timber production, nor any objectives and policies needed to address timber, forest land, and timber harvesting industries. Therefore, the project will not conflict with the existing zoning for forest land, timberland or timberland zoned Timberland Production and provide *no impact*.

[2] Department of Conservation, Farmland Mapping & Monitoring Program, (https://www.conservation.ca.gov/dlrp/fmmp) (accessed on 03/09/2020)

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. Please refer to the discussion for c) above. The proposed project would not result in the loss of forest land or conversion of forest land to non-forest uses. Therefore, the proposed project would have *no impact*.

e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

Less than Significant Impact. Please refer to discussions a) and c) of this section above. The project will result in the conversion of Farmland to a non-agricultural use, though Mitigation Measure AG-1 will reduce conflicts of the conversion to a *less than significant impact*. The project will not convert forest land to non-forest use as the project is not designated as forest land.

Mitigation Measures

Mitigation Measure AG-1: In order to reduce potential conflicts between urban and agricultural uses, the following measures shall be implemented:

- Potential residents shall be notified about possible exposure to agricultural chemicals at the time of purchase/lease of property within the development.
- A Right-to-Farm Covenant shall be recorded on each tract map or be made a condition of each tract map to protect continued agricultural practices in the area.
- Potential residents shall be informed of the Right-to-Farm Covenant at the time of purchase/lease of property within the development.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan (*e.g.*, by having potential emissions of regulated criterion pollutants which exceed the San Joaquin Valley Air Pollution Control Districts (SJVAPCD) adopted thresholds for these pollutants)?			X	
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

DISCUSSION

a) Conflict with or obstruct implementation of the applicable air quality plan?

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact. The proposed project lies within the San Joaquin Valley

Air Basin (SJVAB). At the Federal level, the SJVAB is designated as extreme nonattainment for the 8-hour ozone standard, attainment for PM_{10} and CO, and nonattainment for $PM_{2.5}$. At the State level, the SJVAB is designated as nonattainment for the 8-hour ozone, PM_{10}, and $PM_{2.5}$ standards. Although the Federal 1-hour ozone standard was revoked in 2005, areas must still attain this standard, and the SJVAPCD recently requested an EPA finding that the SJVAB has attained the standard based on 2011-2013 data.

To meet Federal Clean Air Act (CAA) requirements, the SJVAPCD has multiple air quality attainment plan (AQAP) documents, including:

- Extreme Ozone Attainment Demonstration Plan (EOADP) for attainment of the 1-hour ozone standard (2004);
- 2007 Ozone Plan for attainment of the 8-hour ozone standard;
- 2007 PM_{10} Maintenance Plan and Request for Redesignation; and
- 2008 $PM_{2.5}$ Plan.

Because of the region's non-attainment status for ozone, $PM_{2.5}$, and PM_{10}, if the Project-generated emissions of either of the ozone precursor pollutants (ROG or NOx), PM_{10}, or $PM_{2.5}$ were to exceed the SJVAPCD's significance thresholds, then the project uses would be considered to conflict with the attainment plans. In addition, because the project uses will result in a change in land use and corresponding increases in vehicle miles traveled, they may result in an increase in vehicle miles traveled that is unaccounted for in regional emissions inventories contained in regional air quality control plans.

The annual significance thresholds to be used for the project for construction and operational emissions are as follows:

- 10 tons per year ROG;
- 10 tons per year NOx;
- 15 tons per year PM_{10}; and
- 15 tons per year $PM_{2.5}$.

The project will result in both construction emissions and operational emissions as described below. The California Emissions Estimator (CalEEMod), Version 2016.3.2, was used to estimate construction and operational (vehicle trips) emissions resulting from the proposed project.

<u>Short-Term (Construction) Emissions</u>
Site preparation and project construction would involve excavation, grading, hauling, and various activities needed to construct the project. During construction, the project could generate pollutants such as hydrocarbons, oxides of nitrogen, carbon monoxide, and suspended PM. A major source of PM would be windblown dust generated during

construction activities. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Vehicles leaving the site could deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, the silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site. These emissions would be temporary and limited to the immediate area surrounding the construction site. Table 3-1 presents the construction emissions associated with the project. The project is expected to be built-out over approximately 2 years.

Table 3-1
Proposed Project Construction Emissions

Year	Emissions (tons per year)				
	ROG	**NOx**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Construction 2020	0.0466	0.4221	0.3707	0.0246	0.0231
Construction 2021	0.2481	2.2749	2.1631	0.1251	0.1176
Construction 2022	0.1152	1.0541	1.1045	0.0546	0.0514
Total for All Years of Construction	0.4099	3.7511	3.6383	0.2043	0.1921
Highest Construction Emissions in Any Year	0.2481	2.2749	2.1631	0.1251	0.1176
Significance threshold (tons/year)	10	10	100	15	15
Exceed Threshold – significant impact?	No	No	No	No	No

Notes:
PM_{10} and $PM_{2.5}$ emissions are from the mitigated output to reflect compliance with Regulation VIII – Fugitive PM_{10} Prohibitions.
ROG = reactive organic gases NOx = nitrogen oxides PM_{10} and $PM_{2.5}$ = particulate matter
Calculations use unrounded numbers
Source: CalEEMod output

Operational Emissions

Operational emissions would primarily be generated from vehicles traveling to and from the residential houses. According to the Trip Generation Analysis (see Appendix C, Traffic Impact Analysis) prepared for the project, the proposed residential development would generate approximately 1,699 trips per day. There are no substantial stationary emission generators associated with the project.

The modeling is based on the 116 single-family residential units, and associated project trip generation (see Traffic section of this document for additional project trip generation information). Modeling results are provided in Table 3-2.

Table 3-2
Proposed Project Operational Emissions

Year	Emissions (tons per year)				
	ROG	**NOx**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Total Project Emissions	1.4780	5.3040	5.0819	1.2697	0.3697
Significance threshold (tons/year)	10	10	100	15	15
Exceed Threshold – significant impact?	No	No	No	No	No

Notes:
ROG = reactive organic gases NOx = nitrogen oxides PM_{10} and $PM_{2.5}$ = particulate matter
Area source emissions include emissions from natural gas, landscape, and painting.

Source: CalEEMod output

As demonstrated in Tables 3-1 and 3-2, estimated construction and operational emissions would not exceed the SJVAPCD's significance thresholds for ROG, NOx, PM_{10}, and $PM_{2.5}$ in any given year or at full buildout. As a result, the project uses would not conflict with emissions inventories contained in regional air quality attainment plans, and would not result in a significant contribution to the region's air quality non-attainment status.

Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles. The SJVAPCD provides screening criteria to determine when to quantify local CO concentrations based on impacts of the level of service (LOS) of roadways in the project vicinity.

The Environmental Protection Agency (EPA) defines sensitive receptors as areas where occupants are more susceptible to the adverse effects of exposure to toxic chemicals, pesticides, and other pollutants, including but not limited to, hospitals, schools, daycare facilities, elderly housing and convalescent facilities. The project is not within the immediate vicinity of any sensitive receptor.

As further discussed in the Transportation/Traffic checklist evaluation, the project would not significantly reduce the level of service on local roadways with the proper mitigation measures implemented. Therefore, the project would not significantly contribute to an exceedance that would exceed state or federal CO standards. Additionally, as the estimated construction and operational emissions are below SJVAPCD thresholds, any cumulative considerable increase in criteria pollutants and exposure of sensitive receptors to substantial pollutant concentrations would be less than significant.

As described above, the project will not occur at a scale or scope with potential to contribute substantially or cumulatively to existing or projected air quality violations, impacts, or increases of criteria pollutants for which the San Joaquin Valley region is under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors). The proposed project will comply with all applicable air quality plans. Therefore, no violations of air quality standards will occur and no net increase of pollutants will occur, thus the impact is *less than significant*.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less than Significant Impact. During construction, the various diesel powered vehicles and equipment in use on-site would create localized odors. These odors would be temporary and are not likely to be noticeable for extended periods of time beyond the project site. The potential for diesel odor impacts is therefore considered less than significant. In addition, the proposed uses that would be developed within the project

site are not expected to produce any offensive odors that would result in frequent odor complaints. The proposed project would not create objectionable odors affecting a substantial number of people during project construction or operation, and this impact would be *less than significant*.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES – Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			X	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?				X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

DISCUSSION

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

Less than Significant Impact. A Biological Reconnaissance Survey was prepared by QK for the project on November 8, 2019 (see Appendix A). The results of the survey are summarized herein. A review of literature and database resources was conducted to determine the potential for sensitive biological resources to occur on or near the project site. A California Natural Diversity Database (CNDDB) query was processed to obtain information on sensitive species known to occur within ten miles of the project. Likewise, the National Hydrography Dataset (NHD) and National Wetlands Inventory (NWI) data was reviewed to assess the potential for aquatic resources to be present.

The CNDDB query revealed multiple records of sensitive species occurring within 10 miles of the project. Bird species include the Swainson's Hawk (*Buteo swainsoni*),

burrowing owl (*Athene cunicularia*), and tri-colored blackbird (*Ageleius tricolor*). Mammal species include the San Joaquin kit fox (*Bulpes macrotis mutica*), San Joaquin pocket mouse (*Perognathus inornatus*), and Fresno kangaroo rat (*Dipodomys nitratoides exilis*). Other species of animals include the California tiger salamander (*Ambystoma californiense*), vernal pool fairy shrimp (*Branchinecta lynchi*), and western spadefoot toad (*Spea hammondii*). The CNDDB query did not show any species records occurring on or directly adjacent to the project. The site is located in an area of Fresno County that has not been subject to heavy urban development. Historic imagery indicates that the project site and surrounding areas have been consistently farmed and used for various agricultural and industrial purposes since at least 1998, leaving almost no natural, undeveloped lands in the general vicinity of the site that might be utilized by special-status animal species.

The entire project site is currently an active almond orchard that is well-maintained. Exposed soils were hard and compact with little to no vegetation present except for the nut trees. The limited vegetation on-site consisted of scattered non-native species, including filaree (*Erodium botrys*) and oat grass (*Avena fatua*). During a site visit, there was no indication found that the site was being used by any special-status species identified in the CNDDB query. The majority of the habitat on- and off-site is heavily impacted by the agricultural activities, leaving limited environments for wildlife to forage or find shelter.

Although minimal to no suitable habitat was found within the project site, some areas of better quality (although still low quality), are located off-site primarily to the east. One red-tailed hawk pair was observed on the eastern edge of the project site, which abuts fallow agricultural lands. The red-tailed hawk pair appeared to be foraging. The fallow lands in the vicinity of the project provide foraging habitat for the pair of hawks and other local bird species. No active raptor nests were observed on the project site.

Small mammal burrows were observed near fallow fields and straddling the fence line. The majority of the small mammal burrows appeared to be active. Some burrows were large, in excess of six inches at the entrances. The majority of the burrows appeared to have been used by California ground squirrels (*Otospermophilus beecheyi*) for multiple seasons. Animal signs in the vicinity of these burrows were limited to ground squirrel and other small mammal paw prints. At the southern edge of the project site, canine scat was observed indicating the presence of either domestic dogs or coyotes, both of which would be expected to occur.

Nevertheless, although the project site may provide seasonal foraging for migratory birds and burrowing for small mammals, none of the observed animals were of the special-species status identified in the CDDNB. Mitigation measures BIO-1 through BIO-4 will be incorporated to ensure any potential activity from sensitive or special-status species on the project site to a *less than significant impact*.

Mitigation Measures (MEIR SCH No. 2012111015)

GP MEIR Mitigation Measure BIO-1: Construction of a proposed project should avoid, where possible, vegetation communities that provide suitable habitat for a special-status species known to occur within the Planning Area. If construction within potentially suitable habitat must occur, the presence/absence of any special-status plant or wildlife species must be determined prior to construction, to determine if the habitat supports any special-status species. If special-status species are determined to occupy any portion of a project site, avoidance and minimization measures shall be incorporated into the construction phase of a project to avoid direct or incidental take of a listed species to the greatest extent feasible.

GP MEIR Mitigation Measure BIO-2: Direct or incidental take of any state or federally listed species should be avoided to the greatest extent feasible. If construction of a proposed project will result in the direct or incidental take of a listed species, consultation with the resources agencies and/or additional permitting may be required. Agency consultation through the California Department of Fish and Wildlife (CFFW) 2081 or U.S. Fish and Wildlife Service (USFWS) Section 7 or Section 10 permitting processes must take place prior to any action that may result in the direct or incidental take of a listed species. Specific mitigation measures for direct or incidental impacts to a listed species will be determined on a case-by-case basis through agency consultation.

GP MEIR Mitigation Measure BIO-3: Development within the Planning Area should avoid, where possible, special-status natural communities and vegetation communities that provide suitable habitat for special-status species. If a proposed project will result in the loss of special-status natural community or suitable habitat for special-status species, compensatory habitat-based mitigation is required under CEQA and the California Endangered Species Act (CESA). Mitigation will consist of preserving on-site habitat, restoring similar habitat or purchasing off-site credits from an approved mitigation bank. Compensatory mitigation will be determined through consultation with the City and/or resource agencies. An appropriate mitigation strategy and ratio will be agreed upon by the developer and lead agency to reduce project impacts to special-status natural communities to a less than significant level. Agreed-upon mitigation ratios will depend on the quality of the habitat and presence/absence of a special-status species. The specific mitigation for project level impacts will be determined on a case-by-case basis.

GP MEIR Mitigation Measure BIO-4: Proposed projects within the Planning Area should avoid, if possible, construction within the general nesting season of February through August for avian species protected under Fish and Game Code 3500 and the Migratory Bird Treaty Act (MBTA), if it is determined that suitable nesting habitat occurs on a project site. If construction cannot avoid the nesting season, a pre-construction clearance survey must be conducted to determine if any nesting birds or nesting activity is observed on or within 500-feet of a project site. If an active nest is observed during the survey, a biological monitor must be on site to ensure that no proposed project activities would impact the active nest. A suitable buffer will be established around the

active nest until the nestlings have fledged and the nest is no longer active. Project activities may continue in the vicinity of the nest only at the discretion of the biological monitor.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

No Impact. The NHD and NWI data did not show any riparian habitat or other sensitive natural communities within the project site, or within the vicinity of the project site. This confirms the project proposal has *no impact* on a substantial adverse effect on any riparian habitat or other sensitive natural community.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The NHD and NWI data did not identify any protected wetlands on the project site, resulting in *no impact* to any substantial adverse effect on state or federally protected wetlands.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less than Significant Impact. Please refer to discussion a) of this section above involving the movement of migratory wildlife species and the associated MEIR Mitigation Measures BIO-1 through BIO-4 resulting in a *less than significant impact*. The project would not interfere substantially with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites, as there are no established native resident or migratory wildlife corridors, or native wildlife nursery site on the project site resulting in *a less than significant impact*.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. The project would not conflict with any local policies or ordinances protecting biological resources. Though the proposed project is subject to provisions of the City's Municipal Code regarding trees on public property (Article 3 of Section 13 of the City of Fresno Municipal Code), the proposed project does not conflict with any of the existing ordinances. As a result, *no impact* would occur.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state

habitat conservation plan?

No Impact. The City of Fresno Planning Area is not located within the boundaries of any approved or draft Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other adopted local, regional or state HCP. Therefore, development within the Planning Area would not result in any impacts to an adopted HCP or NCCP.

The PG&E San Joaquin Valley Operation and Maintenance (O&M) Habitat Conservation Plan (PG&E HCP) was approved in 2007 and covers portions of nine counties, including Fresno County and the City of Fresno. This PG&E HCP covers PG&E activities which occur as a result of ongoing O&M that would have an adverse impact on any of the 65 covered species and provides incidental take coverage from the USFWS and CDFW. The project site is not located within the covered area of any other HCP, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Therefore, the project would not conflict with the provisions of the PG&E HCP and the proposed project and would have *no impact*.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

DISCUSSION

a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

No Impact. A historical resource defined by CEQA includes one or more of the following criteria: 1) the resource is listed, or found eligible for listing in, the California Register of Historical Resources (CRHR); 2) listed in a local register of historical resources as defined by Public Resources Code (PRC) Section 5020.1(k); 3) identified as significant in a historical resources survey meeting the requirements of PRC Section 5024.1(g); or 4) determined to be a historical resource by the project's lead agency (PRC Section 21084.1; CEQA Guidelines Section 15064.(a)). Under CEQA, historical resources include built-environment resources and archaeological sites.

Pursuant to Senate Bill 18 (SB 18), Native American tribes traditionally and culturally affiliated with the project area were invited to consult regarding the project based on a list of contacts provided by the Native American Heritage Commission (NAHC). The City of Fresno mailed notices of the proposed project to each of these tribes on October 15, 2018 which included the required 90-day time period for tribes to request consultation, which ended on January 13, 2019.

Pursuant to Assembly Bill 52 (AB 52), the Table Mountain Rancheria and the Dumna Wo-Wah Tribal Government were invited to consult under AB 52. The City of Fresno mailed notices of the proposed project to each of these tribes on October 15, 2018 which included the required 30-day time period for tribes to request consultation, which ended on November 14, 2018.

There are no structures which exist within the project area that are listed in the National or Local register of Historic Places and the project site is not within a designated historic district. Therefore, the project would have *no impact* in causing a substantial adverse change in the significance of a historical resource on the project site.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less than Significant Impact with Mitigation Incorporation. According to the CEQA Guidelines, "When a project will impact an archaeological site, a lead agency shall first determine whether the site is a historical resource" (CEQA Guidelines Section 15064.5(c)(1)). Those archaeological sites that do not qualify as historical resources shall be assessed to determine if these qualify as "unique archaeological resources" (California PRC Section 21083.2). No archaeological resources were identified in the project site. However, there is a potential for unknown archaeological resources to be discovered during construction. GP MEIR Mitigation Measure CUL-2 requires that if unknown archaeological resources are discovered during construction, work in the area would halt and a qualified archaeologist would be contacted. Therefore, adherence to the requirements in GP MEIR Mitigation Measures CUL-1 through CUL-3 would reduce potential impacts to archaeological resources to less than significant with mitigation incorporation.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant Impact with Mitigation Incorporation. Disturbance of human remains interred outside of formal cemeteries would result in a significant impact. If human remains are identified during project construction, Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the Public Resources Code shall apply, as appropriate. In addition, GP MEIR Mitigation Measure CUL-4 of the General Plan MEIR would apply to the project. Therefore, adherence to the requirements in GP MEIR Mitigation Measure CUL-4 would reduce potential impacts to unknown human remains to *less than significant with mitigation* incorporation.

Mitigation Measures (MEIR SCH No. 2012111015)

GP MEIR Mitigation Measure CUL-1: If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluations of the finds in accordance with Section 15064.5 of the CEQA Guidelines and the City's Historic Preservation Ordinance.

If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping incorporation of the site in green space, parks, or open space, or data recovery excavation of the finds.

No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these. Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.

GP MEIR Mitigation Measure CUL-2: Subsequent to a preliminary City review of the project grading plans, if there is evidence that a project will include excavation or construction activities within previously undisturbed soils, a field survey and literature search for prehistoric archaeological resources shall be conducted. The following procedures shall be followed.

If prehistoric resources are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that buried prehistoric archaeological resources are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find and a

qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with CEQA Guidelines Section 15064.5.

If the resources are determined to be unique prehistoric archaeological resources as defined under Section 15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any prehistoric archaeological artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.

If prehistoric resources are found during the field survey or literature review, the resources shall be inventoried using appropriate State record forms and submit the forms to the Southern San Joaquin Valley Information Center. The resources shall be evaluated for significance. If the resources are found to be significant, measures shall be identified by the qualified archaeologist. Similar to above, appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds.

In addition, appropriate mitigation for excavation and construction activities in the vicinity of the resources found during the field survey or literature review shall include an archaeological monitor. The monitoring period shall be determined by the qualified archaeologist. If additional prehistoric archaeological resources are found during excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed.

GP MEIR Mitigation Measure CUL-3: Subsequent to a preliminary City review of the project grading plans, if there is evidence that a project will include excavation or construction activities within previously undisturbed soils, a field survey and literature search for unique paleontological/geological resources shall be conducted. The following procedures shall be followed:

If unique paleontological/geological resources are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that unique paleontological/geological resources are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find and a qualified paleontologist shall be consulted to determine whether the resource requires further study. The qualified paleontologist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to, excavation of the finds and evaluation

of the finds. If the resources are determined to be significant, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any paleontological/geological resources recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.

If unique paleontological/geological resources are found during the field survey or literature review, the resources shall be inventoried and evaluated for significance. If the resources are found to be significant, mitigation measures shall be identified by the qualified paleontologist. Similar to above, appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. In addition, appropriate mitigation for excavation and construction activities in the vicinity of the resources found during the field survey or literature review shall include a paleontological monitor. The monitoring period shall be determined by the qualified paleontologist. If additional paleontological/geological resources are found during excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed.

GP MEIR Mitigation Measure CUL-4: In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains.

Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. ENERGY – Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X

DISCUSSION

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less than Significant Impact. The development of single-family residential houses will consume energy in the short-term during project construction and in the long-term during its daily operations and activities. During construction, the project would typically consume energy by construction vehicles and related equipment. Energy consumption would also occur with operations and activities by residents and guests of the single-family residential houses such as heating and cooling, refrigeration, lighting, electronics, and vehicle trips associated with the residential use.

The California Building Standards Code addresses regulations that apply to the planning, design, operation, construction, use and occupancy of newly constructed buildings or structures. Per these standards, the California Energy Code and California Green Building Standards Code (CALGreen) provide mandatory standards to maximize energy conservation with the use of recycled materials and products in order to reduce material costs. As such, it is anticipated that materials used in construction of the single-family residential subdivision would not involve the wasteful, inefficient, or unnecessary consumption of energy.

The proposed development would be required to comply with the State-mandated building codes to meet minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. Implementation of these standards significantly

increases energy savings, and adherence to State-mandated code requirements and conservation requirements in the Energy Code and CALGreen would ensure that project development would not result in wasteful, inefficient, or unnecessary consumption of energy resources, resulting in a *less than significant impact*.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact. The proposed development would be required to comply with the State-mandated building codes to meet minimum efficiency standards related to various building features, including appliances, water and space heating and cooling equipment, building insulation and roofing, and lighting. Implementation of these standards significantly increases energy savings, and adherence to State-mandated code requirements and conservation requirements in the Energy Code. The project will comply with all state- and local-mandated plans for renewable energy and energy efficiency, resulting in *no impacts*.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GEOLOGY AND SOILS – Would the project:				
a) Directly or Indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:			X	
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

DISCUSSION

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (Refer to California Geological Survey Special Publication 42.);

Less than Significant Impact. Fault rupture is generally expected to occur

along active fault traces that have exhibited signs of recent geological movement (i.e., 11,000 years). Alquist-Priolo Earthquake Fault Zones delineate areas around active faults with potential surface fault rupture hazards that would require specific geological investigations prior to approval of certain kinds of development within the delineated area. The project site is not located within an Alquist-Priolo Earthquake Fault Zone. In addition, no known active or potentially active faults or fault traces are located in the project vicinity. As a result, a *less than significant impact* related to a fault rupture would occur.

ii. Strong seismic ground shaking;

Less than Significant Impact. The City of Fresno is located in an area with historically low to moderate level of seismicity. However, strong ground shaking could occur within the project site during seismic events and occurrences have the possibility to result in significant impacts. Major seismic activity along the nearby Great Valley Fault Zone or the Nunez Fault, or other associated faults, could affect the project site through strong seismic ground shaking. Strong seismic ground shaking could potentially cause structural damage to the proposed project. However, due to the distance to the known faults, hazards due to ground shaking would be minimal. In addition, compliance with the California Building Code (Title 24, California Code of Regulations) would ensure that geotechnical design of the proposed project would reduce potential impacts related to seismic ground shaking to a *less than significant impact*.

iii. Seismic-related ground failure, including liquefaction;

Less than Significant Impact. Soil liquefaction is a phenomenon primarily associated with saturated soil layers located close to the ground surface. During ground shaking, these soils lose strength and acquire “mobility” sufficient to permit both horizontal and vertical movements. Soils that are most susceptible to liquefaction are clean, loose, uniformly graded, saturated, fine-grained sands that lie relatively close to the ground surface. However, loose sands that contain a significant amount of fines (silt and clay) may also liquefy. Based on the predicted seismic accelerations, and soil and groundwater conditions typically encountered in the region, general liquefaction potential is low in Fresno. Additionally, compliance with the Fresno Municipal Code and the California Building Code would ensure potential impacts associated with liquefaction would be *less than significant*.

iv. Landslides?

Less than Significant Impact. A landslide generally occurs on relatively steep slopes and/or on slopes underlain by weak materials. The project site is located on a relatively flat area and is not located next to any hills. In general, the potential for land sliding or slope failure in Fresno is very low and the project site

would not be susceptible to landslides. Therefore, the potential for the proposed project to expose people or structures to risk as a result of landslides would be *less than significant*.

b) Result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact. Grading and earthmoving during project construction has the potential to result in erosion and loss of topsoil. Exposed soils could be entrained in stormwater runoff and transported off the project sites. However, this impact would be reduced to a less than significant level through compliance with water quality control measures, which include preparation of a Stormwater Pollution Prevention Plan (SWPPP) (refer to Section X, Hydrology and Water Quality). Although designed primarily to protect stormwater quality, the SWPPP would incorporate Best Management Practices (BMPs) to minimize erosion. Additional details regarding the SWPPP are provided in Section X, Hydrology and Water Quality of this Initial Study. This impact would be *less than significant*.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less than Significant Impact. As described in response to a) in this section, soils on the project site would not be subject to liquefaction, lateral spreading, or landslides. Additionally, the proposed project would be required to conform with the California Building Code, which would reduce risks related to unstable soils. Therefore, the proposed project would have a *less than significant impact* related to unstable soils.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?

Less than Significant Impact. Expansive soils are characterized by the potential for shrinking and swelling as the moisture content of the soil decreases and increases, respectively. Shrink-swell potential is influenced by the amount and type of clay minerals present and can be measured by the percent change of the soil volume. Compliance with the California Building Code requirements would ensure that geotechnical design of the proposed project would reduce potential impacts related to expansive soils to a less than significant level. As such, the risk of expansive soil affecting the proposed project is considered low and would represent a *less than significant impact*.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The project site is currently served by a wastewater conveyance system maintained by the City of Fresno. Wastewater from the City's collection system is treated at the City's wastewater treatment plant. Development of the proposed Project would not involve the use of septic tanks or alternative wastewater disposal systems. Therefore, the proposed project would have *no impact* related to septic tanks or alternative waste water disposal systems.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant with Mitigation Incorporation. No paleontological resources or unique geological features are known to exist within or near the project site, and the project is not expected to alter or destroy a paleontological resource, site, or unique geologic feature. Furthermore, the project would not require excavation to depths that have not already been disturbed by previous construction. However, should unknown paleontological resource or unique geologic feature be discovered within the project site, GP MEIR Mitigation Measure CUL-3 would apply to the proposed project. Therefore, adherence to the requirements in GP MEIR Mitigation Measure CUL-3 would reduce potential impacts to unknown human remains to *less than significant with mitigation incorporation*.

Mitigation Measures (MEIR SCH No. 2012111015)

GP MEIR Mitigation Measure CUL-3: Subsequent to a preliminary City review of the project grading plans, if there is evidence that a project will include excavation or construction activities within previously undisturbed soils, a field survey and literature search for unique paleontological/geological resources shall be conducted. The following procedures shall be followed:

If unique paleontological/geological resources are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that unique paleontological/geological resources are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find and a qualified paleontologist shall be consulted to determine whether the resource requires further study. The qualified paleontologist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to, excavation of the finds and evaluation of the finds. If the resources are determined to be significant, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any paleontological/geological resources recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term

preservation to allow future scientific study.

If unique paleontological/geological resources are found during the field survey or literature review, the resources shall be inventoried and evaluated for significance. If the resources are found to be significant, mitigation measures shall be identified by the qualified paleontologist. Similar to above, appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. In addition, appropriate mitigation for excavation and construction activities in the vicinity of the resources found during the field survey or literature review shall include a paleontological monitor. The monitoring period shall be determined by the qualified paleontologist. If additional paleontological/geological resources are found during excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. GREENHOUSE GAS EMISSIONS – Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

DISCUSSION

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than Significant Impact. The *State CEQA Guidelines* indicate that a project would normally have a significant adverse green-house gas emission impact if the project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reduction the emissions of greenhouse gases.

Section 15064.4 of the *State CEQA Guidelines* states that: "A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project." In performing that analysis, the lead agency has discretion to determine whether to use a model or methodology to quantify greenhouse gas emissions, or to rely on a qualitative analysis or performance-based standards. In making a determination as to the significance of potential impacts, the lead agency then considers the extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting, whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project, and the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions.

Therefore, consistent with the *State CEQA Guidelines,* Section 15183.5, if a project is consistent with an adopted qualified Greenhouse Gas Reduction Strategy that meets the standards, it can be presumed that the project would not have significant greenhouse gas emission impacts.

The City of Fresno Greenhouse Gas Reduction Plan (GHG Reduction Plan), adopted in December 2014 meets the requirements for a Qualified Greenhouse Gas Reduction Strategy. Therefore, the proposed project's GHG emissions would not be considered a significant impact if the proposed Project would be consistent with the City's GHG Reduction Strategy.

The GHG Reduction Plan includes a strategy to reduce local community GHG emissions to 1990 levels by the year 2020, consistent with the state objectives set forth in the "Global Warming Solutions Act," otherwise known as AB 32. The GHG Reduction Plan includes relevant General Plan objectives and policies. Table 1 evaluates the proposed project's consistency with the applicable objectives and policies included in the GHG Reduction Plan.

Table 1: Consistency with Fresno Greenhouse Gas Reduction Plan

GHG Reduction Plan Strategy	Project Consistency with Strategy
Policy UF-14-a: Design Guidelines for Walkability. Develop and use design guidelines and standards for a walkable and pedestrian-scaled environment with a network of streets and connections for pedestrians and bicyclists, as well as transit and autos.	**Consistent.** The proposed subdivision provides sidewalks, local streets and a pedestrian paseo connection that connects the subdivision to a major street.
Policy UF-14-b: Local Street Connectivity. Design local roadways to connect throughout neighborhoods and large private developments with adjacent major roadways and pathways of existing adjacent development. Create access for pedestrians and bicycles where a local street must dead	**Consistent.** The proposed subdivision provides local streets throughout the neighborhood and connectivity to the adjacent major streets to the north and west. Access for pedestrians and

end or be designed as a cul-de-sac to adjoining uses that provide services, shopping, and connecting pathways for access to the greater community area.	bicyclists is provided at each of the access points from the local street/major street intersections and a pedestrian paseo connection to a major street.
Policy UF-14-c: Block Length. Create development standards that provide desired and maximum block lengths in residential, retail, and mixed use districts in order to enhance walkability.	**Consistent.** The proposed subdivision complies with the development standards for residential block widths of 600 feet, which enhances walkability.
Policy MT-4-b: Bikeway Improvements. Establish and implement property development standards to assure that projects adjacent to designated bikeways provide adequate right-of-way and that necessary improvements are constructed to implement the planned bikeway system shown on Figure MT-2 to provide for bikeways, to the extent feasible, when existing roadways are reconstructed; and alternative bikeway alignments on routes where inadequate right-of-way is available.	**Consistent.** The project site fronts onto a planned Class II bike trail to the west. Conditions of approval will require development standards consistent with necessary improvements and right-of-way for the planned Class II bike trail.

As shown in Table 1, the proposed project would be consistent with the applicable strategies from the GHG Reduction Plan. Therefore, as demonstrated in Table 1 above, the proposed project would not conflict with plans, policies, or regulations adopted for the purpose of reducing GHG emissions. In addition, the proposed project would not result in a substantial increase in GHG emissions. Therefore, the proposed project would generate greenhouse gas emissions that would have a *less than significant effect impact* on the environment.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than Significant Impact. The GHG Reduction Plan includes a strategy to reduce local community GHG emissions to 1990 levels by the year 2020, consistent with the state objectives set forth in the "Global Warming Solutions Act," otherwise known as AB 32. The GHG Reduction Plan includes relevant General Plan objectives and policies.

As shown in Table 1 above, the proposed project would be consistent with the applicable strategies from the GHG Reduction Plan. Therefore, as demonstrated in Table 1 above, the proposed project would not conflict with plans, policies, or regulations adopted for the purpose of reducing GHG emissions. Therefore, the proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs and impacts would be *less than significant*.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HAZARDS AND HAZARDOUS MATERIAL – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				X

DISCUSSION

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant Impact. Construction activities associated with the proposed project would involve the use of limited amounts of potentially hazardous materials, including but not limited to, solvents, paints, fuels, oils, and transmission fluids. However, all materials used during construction would be contained, stored, and handled in compliance with applicable standards and regulations established by the Department of Toxic Substances Control (DTSC), the USEPA, and the Occupational Safety and Health Administration (OSHA). No manufacturing, industrial, or other uses utilizing large amounts of hazardous materials would occur within the project site. Project operation would involve the use of small quantities of commercially-available hazardous materials (e.g., paint, cleaning supplies) that could be potentially hazardous if handled improperly or ingested. However, these products are not considered acutely hazardous and are not generally considered unsafe. All storage, handling, and disposal of hazardous materials during project construction and operation would comply with applicable standards and regulations. The proposed construction of single-family residential houses would not generate significant amounts of any hazardous materials. Therefore, the proposed project would have a *less than significant impact* associated with the routine transport, use, or disposal of hazardous materials, and no mitigation is required.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?

Less than Significant Impact. See discussion a) above. The proposed project would not result in a significant hazard to the public or the environment through a reasonably foreseeable upset or accident condition related to the release of hazardous materials because adequate precautions will be taken as described in subsection a). This impact would be considered *less than significant*. No mitigation is required.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than Significant Impact. The closest existing school is Glacier Point Middle School, located approximately 0.8 miles from the project site. As previously stated, the proposed project would not result in the use or emission of substantial quantities of hazardous materials that would pose a human or environmental health risk. In addition, all materials would be handled, stored, and disposed of in accordance with applicable standards and regulations. Therefore, because the proposed project does not involve activities that would result in the emission of hazardous materials or acutely hazardous substances, implementation of the proposed project would result in a *less than significant impact* in the use or emission of hazardous materials that would adversely affect an existing school.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. According to the DTSC EnviroStor database,[3] the project site is not located on a federal superfund site, State response site, voluntary cleanup site, school cleanup site, evaluation site, school investigation site, military evaluation site, tiered permit site, or corrective action site. The project site is not included on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.[4] As a result, no impacts related to this issue are anticipated, and no mitigation is required. There would be *no impact*.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The nearest airports include the Fresno International Airport, located approximately 16 miles from, the project site, Fresno Chandler Executive Airport, located approximately 10 miles from the project site, and the Sierra Sky Airport, located

[3] California Department of Toxic Substances Control, 2007. EnviroStor, https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=fresno (accessed 03/09/2020).

[4] California Environmental Protection Agency, 2018. Government Code Section 65962.5(a) Hazardous Waste and Substances Site List, https://calepa.ca.gov/sitecleanup/corteselist/section-65962-5a/ (accessed 03/09/2020).

approximately 7 miles from the project site. Operations at the local airports are not expected to pose a safety hazard for people working at or visiting the project site. Therefore, implementation of the proposed project would not expose persons to airport-related hazards, and *no impact* would occur.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact. The proposed project would not result in any alterations of existing roadways; rather it proposes to provide an extension of West Dakota Avenue, east of its intersection with North Grantland Avenue. Therefore, the proposed project would not interfere with any emergency evacuation routes within Fresno or an adopted emergency response plan, and this impact would be *less than significant*.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

No Impact. The project site is located in an urban area and is not located within a very high fire hazard severity zone. Therefore, the proposed project would not expose people or structures to a significant loss, injury or death involving wildland fires and there would be *no impact*.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?		X		
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:			X	
i) Result in a substantial erosion or siltation on- or off-site;			X	
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site:			X	
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			X	
iv) impede or redirect flood flows?				X
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

DISCUSSION

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less than Significant with Mitigation Incorporation. The State Water Resources Control Board and nine Regional Water Quality Control Boards regulate the water quality of surface water and groundwater bodies throughout California. The proposed project is within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB).

Pollutants of concern during construction include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. During construction activities, excavated soil would be exposed with an increased potential to expose soils to wind and water erosion, which could result in temporary minimal increases in sediment load in nearby water bodies, including Basin CD, located approximately 1,300 feet to the west, and Basin EO, located approximately 1,300 to the east. Any potential short-term water quality effects from project related construction activities can be minimized and reduced through implementation of Mitigation Measure HYDRO-1.

Operation of the proposed project could result in surface water pollution associated with chemicals, liquid products, petroleum products (such as paints, solvents, and fuels), and waste that may be spilled or leaked and have the potential to be transported via runoff during periods of heavy precipitation into these water bodies. Implementation of Mitigation Measure HYDRO-2, described below, would ensure that stormwater runoff from the proposed project would be appropriately managed to prevent pollutants from being discharged into these water bodies.

With implementation of Mitigation Measures HYDRO-1 and HYDRO-2, impacts associated with the proposed project would result in a *less than significant impact with mitigation incorporation*.

Mitigation Measure HYDRO-1: To minimize any potential short-term water quality effects from project-related construction activities, the project contractor shall implement Best Management Practices (BMPs) in conformance with the California Storm Water Best Management Practice Handbook for Construction Activity. In addition, the proposed project shall be in compliance with existing regulatory requirements, including the Water Pollution Control Preparation (WPCP) Manual. In addition, implementation of a Storm Water Pollution Prevention Plan (SWPPP) would be required under the National Pollutant Discharge Elimination System (NPDES) to regulate water quality associated with construction activities.

Mitigation Measure HYDRO-2: To reduce the potential for degradation of surface water quality during project operation, prior to issuance of building permits, the project applicant shall develop BMPs consistent with NPDES municipal separate storm sewer system permit (MS4 Permit) to minimize stormwater pollution resulting from the proposed project. Specifically, source control measures, treatment controls, and BMP maintenance requirements shall be identified and described to ensure that the project complies with post-construction stormwater management requirements of the MS4 Permit.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less than Significant Impact. The proposed project would include stormwater control features and BMPs as required by Mitigation Measures HYDRO-1 and HYDRO-2, as described in section a) above. Therefore, the proposed project would not substantially interfere with groundwater recharge.

As discussed below in Section XIX, Utilities and Service Systems, the City receives all of its water supply from groundwater. The City has indicated that groundwater wells, pump stations, recharge facilities, water treatment and distribution systems shall be expanded incrementally to mitigate increased water demands. One of the primary objectives of Fresno's future water supply plans detailed in Fresno's current Urban Water Management Plan (UWMP) is to balance groundwater operations through a host of strategies. Through careful planning, Fresno has designed a comprehensive plan to accomplish this objective by increasing surface water supplies and surface water treatment facilities, intentional recharge, and conservation, thereby reducing groundwater pumping. The City continually monitors impacts of land use changes and development project proposals on water supply facilities by assigning fixed demand allocations to each parcel by land use as currently zoned or proposed to be rezoned. The UWMP was made available for public review together with the MND for the proposed project.

Until 2004, groundwater was the sole source of water for the City. In June 2004, a $32 million Surface Water Treatment Facility ("SWTF") began providing Fresno with water treated to drinking water standards. A second surface water treatment facility is operational in southeast Fresno to meet demands anticipated by the growth implicit in the 2025 Fresno General Plan. Surface water is used to replace lost groundwater through Fresno's artificial recharge program at the City-owned Leaky Acres and smaller facilities in Southeast Fresno. Fresno holds entitlements to surface water from Millerton Lake and Pine Flat Reservoir. In 2006, Fresno renewed its contract with the United States Bureau of Reclamation, through the year 2045, which entitles the City to 60,000 acre-feet per year of Class 1 water. This water supply has further increased the reliability of Fresno's water supply.

Also, in 2006, Fresno updated its Metropolitan Water Resources Management Plan designed to ensure the Fresno metro area has a reliable water supply through 2050. The plan implements a conjunctive use program, combining groundwater, treated surface water, artificial recharge and an enhanced water conservation program.

In the near future, groundwater will continue to be an important part of the City's supply, but will not be relied upon as heavily as has historically been the case. The City is

planning to rely on expanding their delivery and treatment of surface water supplies and groundwater recharge activities.

In addition, the General Plan policies require the City to maintain a comprehensive conservation program to help reduce per capita water usage, and includes conservation programs such as landscaping standards for drought tolerance, irrigation control devices, leak detection and retrofits, water audits, public education and implementing U.S. Bureau of Reclamation Best Management Practices for water conservation to maintain surface water entitlements.

Implementation of the Fresno General Plan policies, the Kings Basin Integrated Regional Water Management Plan, City of Fresno UWMP, Fresno-Area Regional Groundwater Management Plan, and City of Fresno Metropolitan Water Resource Management Plan and the applicable mitigation measures of approved environmental review documents will address the issues of providing an adequate, reliable, and sustainable water supply for the project's urban domestic and public safety consumptive purposes. The recently adopted 2015 UWMP analyzed the Fresno General Plans land use capacity.

The Department of Public Utilities Water Division will require the construction of three 16-inch water mains to be constructed along major streets surrounding and near the subject property, along with extension of water mains within the proposed tract to provide service to each lot. The applicant would be required to comply with all requirements of the City of Fresno Department of Public Utilities that would reduce the project's water impacts to *less than significant*.

When development permits are issued, the subject site would be required to pay drainage fees pursuant to the Drainage Fee Ordinance. The Fresno Metropolitan Flood Control District (FMFCD) has stated that the FMFCD system can accommodate the proposed request subject to several conditions of approval, including the construction of 18-inch and 30-inch storm drain mains.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:

i. Result in substantial erosion or siltation on- or off-site;

Less than Significant Impact. Construction of the proposed project would result in grading and landform alteration on the site that would expose native soils that could be subject to the effects associated with wind and water erosion unless adequate measures are taken to limit the transport of soils in surface water from the site to downstream locations. As discussed under discussion a) in this section, the project applicant would be required to implement a SWPPP that

would identify specific measures to address erosion and siltation resulting from grading and construction as well as the potential long-term water quality impacts.

Stormwater collection and disposal, and flood control for the City of Fresno, City of Clovis, and the unincorporated areas within the City of Fresno's Sphere of Influence are provided by the Fresno Metropolitan Flood Control District (FMFCD).

The project site does not currently include existing impervious surface(s). As required by Mitigation Measures HYDRO-1 and HYDRO-2, a SWPPP would be developed prior to any ground disturbance at the project site and would include practices to reduce erosion and surface water contamination during construction. In addition, the proposed project would not alter the course of a stream or river. Therefore, the proposed project would have a less than significant impact related to drainage patterns.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

Less than Significant Impact. Please refer to discussion c)i in this section. Implementation of the proposed project would not substantially increase the rate or amount of surface runoff that would result in flooding on- or off-site. This impact would be considered *less than significant*. No mitigation is required.

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

Less than Significant Impact. The proposed project would result in an increase in impervious surfaces. With implementation of Mitigation Measure HYDRO-1, which would require implementation of BMPs and compliance with the WPCP, construction impacts related to exceeding the capacity of, and providing additional sources of polluted runoff to, storm water drainage systems would be reduced to *less than significan*t levels.

As discussed above, the proposed project would result in an increase in impervious surfaces, but would not ultimately substantially increase runoff from the site. The proposed project would not contribute runoff water that would exceed the capacity of an existing or planned storm water drainage system. Mitigation Measure HYDRO-2 requires preparation of a SWPPP that would require site design, source control, and treatment control BMPs to be incorporated into final design. With implementation of Mitigation Measure HYDRO-2, operational impacts related to exceeding the capacity of, and providing additional sources of polluted runoff to, storm water drainage systems would be reduced to *less than significant* levels.

iv. Impede or redirect flood flows?

No Impact. Title 40 of the Code of Federal Regulations, Part 60 regulations (40CFR60), and the floodplain ordinance of the City of Fresno require that placement and flood provision structures within a floodplain not result in a cumulative change in the floodplain water surface that exceeds one foot. In addition, the regulations under 40CFR60 do not allow placement of structures within a regulatory floodway unless that placement would not result in any increase in the floodplain water surface elevation, meaning that there is no displacement or redirection of the floodway. The City's floodplain ordinance requires that a registered Civil Engineer in the State of California certify that no displacement of floodwater would result from the flood proofing of a structure within a floodplain or a regulatory floodway. As a result, *no impact* would occur after implementation of the proposed project.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less than Significant Impact. The project site is not located in a flood hazard, tsunami, or seiche zones. Refer to discussion a) in Section IX, Hazards and Hazardous Materials regarding the use of hazardous materials within the project site. As a result, a *less than significant impact* would occur.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less than Significant Impact. The City is located within the Kings Sub-basin, which is part of the larger San Joaquin Valley Groundwater Basin. The planning documents regarding water resources for the City include City of Fresno Urban Water Management Plan, and City of Fresno Metropolitan Water Resources Management Plan. As noted above, the Project would be required to adhere to NPDES drainage control requirements during construction and operation as well as to FMFCD drainage control requirements. As a result, the project would not include any other waste discharges that could conflict with the Basin Plan, resulting in a *less than significant impact*.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. LAND USE AND PLANNING – Would the project:				
a) Physically divide an established community?				X

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

DISCUSSION

a) Physically divide an established community?

No Impact. The physical division of an established community typically refers to the construction of a physical feature (such as an interstate highway or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community, or between a community and outlying areas. For instance, the construction of an interstate highway through an existing community may constrain travel from one side of the community to another; similarly, such construction may also impair travel to areas outside of the community.

The project proposes to provide pedestrian connections through local streets and paseo connectivity to current and future major streets. These improvements would improve connectivity, and would not divide an established community. Therefore, the proposed project would have *no impact* related to these issues.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The subject properties include a request for a Plan Amendment, Pre-zone, and Tract Map. A pre-zone is required for properties not currently located within the City limits of the City of Fresno. The Plan Amendment is required when proposing to change the land use, which this project will change the Residential – Medium and High Density land use designations to the Residential – Medium Low Density to provide for consistency with the proposed Tentative Tract Map subdividing the subject properties into a 116-lot single-family subdivision. This change in land use is anticipated in an upcoming update to the West Area Community Plan, which identifies the subject properties as Residential – Medium Low Density.

Upon approval of the Plan Amendment and Pre-zone, the project would not conflict with any land use plan, policy or regulation given that the Tentative Tract Map would facilitate consistency for the single-family residential development.

Fresno General Plan Goals, Objectives and Policies

Goals

Goal 7: Provide for a diversity of districts, neighborhoods, housing types (including affordable housing), residential densities, job opportunities, recreation, open space, and educational venues that appeal to a broad range of people throughout the City.

Goal 8: Develop Complete Neighborhoods and districts with an efficient and diverse mix of residential densities, building types, and affordability which are designed to be healthy, attractive, and centered by schools, parks, and public and commercial services to provide a sense of place and that provide as many services as possible within walking distance.

Goal 9: Promote a city of healthy communities and improve quality of life in established neighborhoods.

Goal 13: Emphasize the City as a role model for good growth management planning, efficient processing and permit streamlining, effective urban development policies, environmental quality, and a strong economy. Work collaboratively with other jurisdictions and institutions to further these values throughout the region.

Objectives and Policies

These goals contribute to the establishment of a comprehensive City-wide land use planning strategy to meet residential development and density objectives, achieve efficient and equitable use of resources and infrastructure, and create an attractive living environment in accordance with Objective LU-1 of the Fresno General Plan.

Policy UF-1-a supports development projects that provide Fresno with a diversity of urban and suburban neighborhood opportunities. Furthermore, this policy anticipates future growth of medium and lower densities in existing and new mixed-use urban centers, compact neighborhoods, and suburban areas. This policy also envisions making use of underutilized land, reducing long-term farmland conversion, supporting transit and multiple transportation modes, mixing and balancing compatible residential and retail uses in new growth areas, and existing infill areas to produce economic opportunities, jobs, housing options, recreation, and other choices.

Policy UF-1-f supports Complete Neighborhood design concepts and development standards to achieve the development of Complete Neighborhoods and the residential density targets of the General Plan.

Policy UF-14-a supports development and use of design guidelines and standards for a walkable and pedestrian-scaled environment with a network of streets and connections for pedestrians and bicyclists, as well as transit and autos.

Policy UF-14-b supports the design of local roadways to connect throughout neighborhoods and large private developments with adjacent major roadways and pathways of existing adjacent development.

Policy UF-14-c supports the creation of development standards that provide desired and maximum block lengths in residential districts in order to enhance walkability.

Policy LU-5-b promotes medium-low density residential uses to preserve existing uses of that nature or provide a transition between low and medium density residential areas.

The project supports the above-mentioned goals and policies in that the intensity of the proposed development conforms to the applicable land use designation of the Fresno General Plan.

The project would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect and therefore would result in *no impact*.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. MINERAL RESOURCES – Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

DISCUSSION

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. There are no known mineral resources within or in the vicinity of the project site. The principal area for mineral resources is located adjacent to the Planning Area

along the San Joaquin River Corridor. The City's Resource Conservation and Resilience Element of the City's General Plan include several policies to conserve aggregate mineral resources. As a result, the proposed project would not result in the loss of availability of a known mineral resource of value to the region or residents of the State. Therefore, the proposed project would have *no impact*.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. Please refer to the discussion for a). The proposed project would not result in the loss of availability of any known locally-important mineral resource recovery sites. Therefore, the proposed project would have *no impact*.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. NOISE – Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			X	

DISCUSSION

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?

Less than Significant with Mitigation Incorporation. The project may result in increases in both temporary (construction) as well as permanent (operational) noise and/or vibration, particularly from vehicles associated with the project. To assist in the assessment of noise impacts associated with the 27-acre residential development, an Acoustical Analysis Report (Report) was prepared for the proposed project in June 2019 by Precision Civil Engineering, Inc. (Precision). Refer to Appendix B for the Report, which is summarized herein.

The City of Fresno General Plan Noise Element (adopted 12/18/2014) provides noise level criteria for land use compatibility for both transportation and non-transportation (stationary) noise sources. The General Plan sets noise compatibility standards for transportation noise sources in terms of the Day-Night Average Level (Ldn). The Ldn represents the time-weighted energy average noise level for a 24-hour day, with a 10 dB penalty added to noise levels occurring during the nighttime hours (10:00 p.m. – 7:00 a.m.). The Ldn represents cumulative exposure to noise over an extended period of time and are therefore calculated based upon annual average conditions. The General Plan noise level standards for transportation noise sources for residential projects are 65 Ldn/CNEL, dB for outdoor activity areas and 45 Ldn/CNEL, dB for interior spaces.

Generally, the three primary sources of substantial noise that affect the City of Fresno and its residents are all transportation-related and consist of local streets and regional highways; airport operations at the Fresno Yosemite International, Fresno-Chandler, and the Sierra Sky Park airports; and railroad operations along the BNSF Railway and the Union Pacific Railroad lines.

In developed areas of the community, noise conflicts often occur when a noise sensitive land use is located adjacent or in proximity to a noise generator. Noise in these situations frequently stems from on-site operations, use of outdoor equipment, uses where large numbers of persons assemble, and vehicular traffic. Some land uses, such as residential dwellings, hospitals, office buildings, and schools are considered noise-sensitive receptors and involve land uses associated with indoor and/or outdoor activities that may be subject to stress and/or significant interference from noise.

For stationary noise sources, Section 15-2506 of the City's Municipal Code establishes hourly acoustical performance standards for stationary noise sources. The stationary noise level standards are separated by two different factors: hourly equivalent sound level (Leq) and maximum sound level (Lmax). The stationary noise level standards for

residential projects are 50 Leq and 70 Lmax for the daytime (7:00 a.m. – 10:00 p.m.), and 45 Leq and 60 Lmax for nighttime (10:00 p.m. – 7:00 a.m.).

Additional guidance is provided in Section 10-102(b) of the City's Municipal Code. Section 10 provides existing ambient noise levels to be applied to various districts, further divided into various hours of the day. For residential projects, a noise violation is expected to occur if ambient noise levels (measured in dBA) are increased by more than 5 dBA.

Exterior Noise Levels

Based on the Acoustical Analysis Report (Appendix B), the existing road noise exposure at the closest proposed noise-sensitive building is 65.7 dB Ldn for a receiver at 5 feet above the project grade. As previously mentioned, the Noise Element requires a maximum of 60 dB Ldn for acceptable exterior noise exposure for outdoor activity areas of noise-sensitive land uses. Because the development consists of primarily single-family houses, outdoor activity areas are assumed to be located within individual backyards. Mitigation measures will be required because the existing road noise exposure is currently 5.7 dB Ldn higher than the maximum required 60 dB Ldn.

The applicant has proposed construction of a sound wall along the northern (West Dakota Avenue), western (North Grantland Avenue), and southern boundaries of the project site. The sound wall is intended to provide acoustical shielding of individual backyards and to reduce the amount of noise affecting the interior of the proposed single-family residential houses.

Insertion loss (noise reduction) was calculated using a sound wall insertion loss program based on the FHWA Model. This model calculates insertion loss of a sound wall based on the effective height of the noise source, height of the receiver, distance from the receiver to the wall, and distance from the noise source to the wall. The standard height of a residential receiver is five feet above the building pad elevation.

The calculations resulted in the recommendation for a sound wall with a minimum height of 8 feet which would reduce the noise exposure by 6.5 dB at the rear of the closest proposed houses. The sound wall would need to be continuous without gaps or openings and should be constructed of a dense material, such as masonry block, within 420 feet of the center line of North Grantland Avenue. Mitigation Measures NOI-1 and NOI-2 will provide mitigation for reducing exterior noise levels to a *less than significant impact* with the construction of a sound wall and wood fence (see below).

Interior Noise Exposure

The maximum interior noise level standard required by the City of Fresno General Plan is 45 dB Ldn. The construction of the aforementioned sound wall will reduce the exterior noise exposure to 59.2 dB Ldn. The proposed construction will need to be capable of providing an outdoor-to-indoor noise level reduction (NLR) of approximately 14.2 dB (59.2 dB Ldn – 45 dB Ldn = 14.2 dB Ldn) for first-floor levels. Second-floor levels, if

proposed, would need to be capable of providing an NLR of approximately 20.7 dB Ldn.

A specific analysis of interior noise levels was not performed. However, it is generally accepted that common residential construction methods complying with current Building Code requirements will reduce exterior noise levels by at least 15-20 dB, if windows and doors are closed. This would be sufficient for first-floor levels only. If second-floor levels are built on lots abutting North Grantland Avenue, standard construction methods will likely not be enough to reach the 45 dB requirement. Mitigation Measures NOI-3 and NOI-4 will provide a *less than significant impact* with additional building design criteria to reduce interior noise levels.

Mitigation Measures

Mitigation Measure NOI-1: Install an 8-foot block wall or combination of block wall and landscape berm to a total of 8 feet in height along North Grantland Avenue, and the north (West Dakota Avenue) and south property lines extending 420 feet from the center line of North Grantland Avenue. Refer to Exhibit 1 in Appendix B for specifics on wall location and length.

Mitigation Measure NOI-2: Install a 6-foot wooden fence with ½-inch thick wood slats on both sides and staggered so that there is no direct view through the fence and should extend 150 feet east starting from where the sound wall ends along the northern and southern property lines. Refer to Exhibit 1 in Appendix B for specifics on wall location and length.

Mitigation Measure NOI-3: If a second floor is built for any house(s) on lots along North Grantland Avenue, additional design criteria shall be included in the homes to account for needing a dB reduction of at least 20.7 dB. Standards and recommendations for noise reduction can be implemented as follows: Reduction of relative window area, providing acoustical glazing (e.g. thicker glass or increased air space between panes) within frames with low air infiltration rates, fixed acoustical glazing, increasing wall mass (e.g. using stucco or brick in lieu of wood siding), isolating wall members by using double or staggered stud walls, reducing door area, installation of solid-core doors, sealing door perimeters with suitable gaskets, and/or installing plywood sheathing under roofing materials.

Mitigation Measure NOI-4: Lots 1-3 on West Fedora Avenue will require additional building requirements for the first and second floor as follows: Reduction of relative window area, providing acoustical glazing (e.g. thicker glass or increased air space between panes) within frames with low air infiltration rates, fixed acoustical glazing, increasing wall mass (e.g. using stucco or brick in lieu of wood siding), isolating wall members by using double or staggered stud walls, reducing door area, installation of solid-core doors, sealing door perimeters with suitable gaskets, and/or installing plywood sheathing under roofing materials.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant Impact. No permanent noise sources would be located within the project site that would expose persons to excessive groundborne vibration or noise levels. Construction activities associated with implementation of the proposed project are not expected to result in excessive groundborne vibration or groundborne noise levels. Therefore, implementation of the proposed project would not permanently expose persons within or around the project sites to excessive groundborne vibration or noise and the project impacts would be *less than significant*.

c) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Less than Significant Impact. The nearest airports to the project site include the Fresno International Airport, Fresno Chandler Executive Airport, and the Sierra Sky Park Airport (see Section IX: Hazards and Hazardous Materials, subsection e) for distances to airports). Each of these airports has an Airport Land Use Compatibility Plan (ALUCP) which guides approximate compatible land uses. The City of Fresno General Plan, other City land use plans, and all City land use decisions must be compatible with the adopted ALUCP. Each ALUCP includes CNEL noise contours based on projected airport and aircraft operations. The project site is not located in an ALUCP or within two miles of a public airport, therefore project implementation would not expose people residing or working in the project area to excessive noise levels and impacts would be *less than significant*.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. POPULATION AND HOUSING – Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

DISCUSSION

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less than Significant Impact. Direct growth consists of activities that directly facilitate population growth. The construction of new dwelling units is considered an activity that directly results in population growth. Indirect growth inducements consist of activities that in themselves do not facilitate population growth, but instead indirectly cause growth. Examples include the creation of new jobs in a sparsely populated area that results in workers moving into the area or the removal of a physical barrier to growth, such as the extension of sewer service to an unserved area.

A key consideration in evaluating growth inducement is whether the activity in question constitutes “planned growth.” A residential project that is consistent with the underlying General Plan and zoning designations would generally be considered planned growth because it was previously contemplated by these long-range documents, and, thus, would not be deemed to have a significant growth-inducing effect. Likewise, a project that requires a General Plan Amendment and rezone to develop more intense uses than are currently allowed may be considered to have a substantial growth-inducing effect because such intensity was not contemplated by the applicable long-range documents. It should be noted that these are hypothetical examples, and conclusions about the potential for growth inducement will vary on a case-by-case basis.

The primary concern with significant change in population and housing is whether the change will result in a significant impact associated with unplanned growth. In addition to environmental impacts, unplanned growth can have other deleterious effects, by thwarting the implementation of General Plan and other applicable policies designed to ensure orderly development, or by occurring at a rate that would outpace the availability of essential public services. The project includes policies and guidelines to control and direct growth in a well-planned manner, thus ensuring that such growth would be compatible with existing and future uses and with the General Plan policies related to growth. Because the project is proposing less density (Medium Low Density) than what

is currently planned for (Medium and High Density), and the project is consistent with the draft West Area Community Plan indicating the subject properties as Residential – Medium Low Density, it can be concluded that the proposed project would be considered planned growth and, therefore, not "growth inducing." This would provide a *less than significant impact*.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The project site is currently used for agriculture, and no housing is proposed on the subject properties. Therefore, the project would not displace existing housing or require the construction of replacement housing and would result in *no impact*.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. PUBLIC SERVICES – Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?		X		
Police protection?		X		
Schools?			X	
Parks?		X		
Other public facilities?		X		

DISCUSSION

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

Fire protection

Less than Significant Impact with Mitigation Incorporation. The City of Fresno Fire Department (FFD) offers a full range of services including fire prevention, suppression, emergency medical care, hazardous materials, urban search, and rescue response, as well as emergency preparedness planning and public education coordination within the Fresno City limits, in addition to having mutual aid agreements with the Fresno County Fire Protection District, and the City of Clovis Fire Department.

The FFD operates its facilities under the guidance set by the National Fire Protection Association in NFPA 1710, the Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operation to the Public by Career Fire Departments. NFPA 1710 sets standards for turnout time, travel time, and total response time for fire and emergency medical incidents, as well as other standards for operation and fire service. The FFD has established the objectives set forth in NFPA 1710 as department objectives to ensure the public health, safety and welfare.

According to FFD, the proposed project would be served by Fire Station 18. Currently, this fire station is temporarily being utilized just east of the intersection of North Grantland Avenue and West Bullard Avenue. Construction of the new Fire Station 18 commenced in March of 2020. If the project is approved and final occupancy is granted for homes within the proposed subdivision, fire services will be provided by the temporary station.

The Fresno General Plan contains the following objectives and policies:

- Objective E-25: Ensure that fire protection, emergency medical and all emergency services are provided in adequate, efficient and cost-effective manner.

- Objective E-26: Ensure that the FFD's staffing and equipment resources are sufficient to implement all requests for fire and emergency services from the citizens of Fresno.

- Policy E-16-a: Use adopted general and specific plans, the city's GIS database, and the fire station location program to achieve optimum siting of

future stations. For those station sites identified by the 2025 General Land Use and Circulation Map, but not yet acquired by the city, the underlying alternative land uses shown on Table 5 shall be applied. The siting of any additional new station locations to serve future development, such as the North and Southeast Growth Areas shall occur through the applicable community or specific plan adoption/amendment process.

The proposed project, as a condition of approval, will be required to comply with provisions set forth by the Director. Additionally, the project would be required to comply with all applicable fire and building safety codes (California Building Code and Uniform Fire Code) to ensure fire safety elements are incorporated into final project design, including providing the minimum turning radii for fire equipment. Proposed interior streets will be required to provide appropriate widths and turning radii to safely accommodate emergency response and the transport of emergency/public safety vehicles. The project will also be designed to meet FFD requirements regarding water flow, water storage requirements, hydrant spacing, infrastructure sizing, and emergency access. As a result, appropriate fire safety considerations will be included as part of the final design of the project. In addition, the project will be subject to development impact fees as determined by the City. See Public Facilities Mitigation Measures herein.

Police protection

Less than Significant Impact with Mitigation Incorporation. Protection services would be provided to the project site from the existing Northwest Policing District, which is approximately 3.5 miles from the project site, just north of the intersection of North Marks Avenue and West Shaw Avenue. The Fresno Police Department (FPD) provides a full range of police services including uniformed patrol response to calls for service, crime prevention, tactical crime and enforcement (including gang and violent crime suppression), and traffic enforcement/accident prevention. The project site is located in an area abutting the Northwest Policing District, expanding its service area. The project will be subject to development impact fees as determined by the City. See Public Facilities Mitigation Measures herein.

Schools

Less than Significant Impact. Educational services for the proposed project will be provided by the Central Unified School District (CUSD). Prospective students will be attending the following schools for the proposed tract: Harvest Elementary School, Glacier Point Middle School, and Central High School. Funding for schools and school facilities impacts is outlined in Education Code Section 17620 and Government Code Section 65995 et. seq., which governs the amount of fees that can be levied against new development. These fees are used to construct new or expanded school facilities. Payment of fees authorized by the statute is deemed “full and complete mitigation.”

The proposed project will be required to pay impact fees from new development based

on the Developer Fee rates that are in place at the time payment is due. The payment amount is determined by the School District and the State Allocation Board (SAB) who sets the maximum per-square-foot Level 1 school impact fees every two years at its January meeting. Payment of the applicable impact fees by the project applicant would fund capital and labor costs associated with providing school services to the project. The proposed project would provide *less than significant impacts* to schools.

Parks

Less than Significant Impact with Mitigation Incorporation. The proposed project includes one outlot to serve as open space, a paseo to connect the subdivision to West Dakota Avenue, and a pedestrian trail. The nearest park is Inspiration Park located north on West Gettysburg Avenue, east of North Hayes Avenue, which is 2.20 miles away from the subject property. The project will be required to pay City park facility impact fees to meet the City's open space requirements. See Response XVI, Recreation for additional information and Public Facilities Mitigation Measures herein.

Other public facilities

Less than Significant Impact with Mitigation Incorporation. Development of the project will increase the demand for other public services. However, the relatively small increase in demand will not in and of itself require construction of additional facilities. As such, implementation of MEIR Mitigation Measures PS-1 through PS-5 and General Plan Objectives and Policies, as identified above, would ensure adequate public services can be provided.

The City has determined that it can accommodate the project with existing facilities and personnel. The project applicant will be required to pay development impact fees for fire protection, police protection, schools, parks, or other public facilities as determined by the City to receive such services (Mitigation Measure PUB-1). Therefore, there is a *less than significant impact with mitigation incorporation*.

Mitigation Measures

PUB-1: The project applicant shall pay development impact fees for police, fire, recreation, and other public services as determined by the City of Fresno.

PS-1: As future facilities are planned, the fire department shall evaluate if specific environmental effects would occur. Typical impacts from fire facilities include noise, traffic, and lighting. Typical mitigation to reduce these impacts includes:

- *Noise*: Barriers and setbacks on the fire department sites.
- *Traffic*: Traffic devices for circulation and a "keep clear zone" during emergency responses.

- *Lighting*: Provision of hoods and deflectors on lighting fixtures on the fire department sites.

PS-2: As future police facilities are planned, the police department shall evaluate if specific environmental effects would occur. Typical impacts from police facilities include noise, traffic, and lighting. Typical mitigation to reduce potential impacts from police department facilities includes:

- *Noise*: Barriers and setbacks on the police department sites.
- *Traffic*: Traffic devices for circulation.
- *Lighting*: Provision of hoods and deflectors on lighting fixtures on the police department sites.

PS-3: As future public and private school facilities are planned, school districts shall evaluate if specific environmental effects would occur with regard to public schools, and P-D shall evaluate other school facilities. Typical impacts from school facilities include noise, traffic, and lighting. Typical mitigation to reduce potential impacts from school facilities includes:

- *Noise*: Barriers and setbacks placed on school sites.
- *Traffic*: Traffic devices for circulation.
- *Lighting*: Provision of hoods and deflectors on lighting fixtures for stadium lights.

PS-4: As future parks and recreational facilities are planned, the City shall evaluate if specific environmental effects would occur. Typical impacts from school facilities include noise, traffic, and lighting. Typical mitigation to reduce potential impacts from park and recreational facilities includes:

- *Noise*: Barriers and setbacks placed on school sites.
- *Traffic*: Traffic devices for circulation.
- *Lighting*: Provision of hoods and deflectors on lighting fixtures for outdoor play area/field lights.

PS-5: As future detention, court, library, and hospital facilities are planned, the appropriate agencies shall evaluate if specific environmental effects would occur. Typical impacts from court, library, and hospital facilities include noise, traffic, and lighting. Typical mitigation to reduce potential impacts includes:

- *Noise*: Barriers and setbacks placed on school sites.
- *Traffic*: Traffic devices for circulation.
- *Lighting*: Provision of hoods and deflectors on outdoor lighting fixtures.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. RECREATION - Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?		X		

DISCUSSION

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

There are no parks in the vicinity (at least 2 miles) of the subject property, providing minimal to no use of the existing neighborhood parks resulting in *no impact*.

b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

Policy F-1-f of the City's General Plan states that the City of Fresno will continue to pursue implementation of an open space standard of 3.0 acres of public park land for every 1,000 persons residing in the City's Planning Area. The proposed project could have a total population of 356 persons at build-out (based on the City's Housing Element estimate of 3.07 persons per household estimate, multiplied by 116 units). This would equate to a need for approximately 1.07 acres of parkland based on the City's standard. Per Policy F-2-a, the proposed project will construct parkland and/or pay development impact fees for the acquisition and development of parks and recreation facilities to meet the project's needs. The proposed project would create a park/open space area in a single outlot, along with a pedestrian and bike trail. Impact fees may still apply as determined by the City.

The City has established Park Facilities Fees. In order to implement the goals and objectives of the City's General Plan, and to mitigate the impacts caused by future development in the City, park facilities must be constructed. The City Council has determined that a Park Facilities Fee is needed in order to finance these public facilities and to pay for each development's fair share of the construction and acquisition costs. To reduce the impact to a *less than significant* level, Mitigation Measure PUB-1 requires the project applicant to create on-site (or participate in the creation of off-site) equivalent of 3 acres of park space per 1,000 persons, totaling approximately 1.07 acres.

Mitigation Measures

PUB-1 (Payment of Public Service Impact Fees). See attached MEIR and Project Specific Mitigation Measure Monitoring Checklist.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. TRANSPORTATION – Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?		X		
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?		X		
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?			X	

DISCUSSION

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

The proposed project includes up to 116 single-family residential units, which could result in potentially significant increases in traffic in and around the project area. Results of a Traffic Impact Analysis conducted by JLB Traffic Engineering, Inc. in April of 2018 (Appendix C) are summarized herein.

Study Intersections

The following intersections were included in the evaluation:

1. Grantland Avenue / Ashlan Avenue
2. Bryan Avenue / Ashlan Avenue
3. Grantland Avenue / Dakota Avenue (Future)
4. Bryan Avenue / Dakota Avenue (Future)
5. Grantland Avenue / Project Driveway (Future)
6. Grantland Avenue / Shields Avenue
7. Grantland Avenue / Clinton Avenue

The following road segments were included in the evaluation:

1. Grantland Avenue between Ashlan Avenue and Dakota Avenue Alignment
2. Grantland Avenue between Dakota Avenue Alignment and Shields Avenue
3. Grantland Avenue between Shields Avenue and Clinton Avenue

Project Trip Generation

Trip generation rates for the proposed project at buildout were obtained from the 10th Edition of the Trip Generation Manual published by the Institute of Transportation Engineers (ITE). Table 17-1 presents the trip generation for the proposed project with trip generation rates for single-family detached housing. At buildout, the proposed project is estimated to generate a maximum of 1,699 daily trips, 133 AM peak hour trips and 178 PM peak hour trips.

Table 17-1: Proposed Project Trip Generation

Project Component	Units	Total Daily Trips	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour In	PM Peak Hour Out
Single-family detached housing (210)	180	1,699	33	100	112	66

Source: Project Traffic Impact Analysis (Appendix __), page 19

Project Trip Distribution

The trip distribution assumptions were developed based on existing travel patterns, the Fresno COG Project Select Zone, the existing roadway network, engineering judgement, data provided by the developer, knowledge of the study area, existing residential and commercial densities, and the City of Fresno General Plan Circulation

Element in the vicinity of the project. Figure 3 of Appendix C illustrates the Project Only Trips to the study intersections.

Project Study Scenarios
The following study scenarios were performed:

- Existing Traffic Conditions
- Existing plus Project Traffic Conditions
- Near Term plus Project Traffic Conditions
- Cumulative Year 2035 No Project Traffic Conditions
- Cumulative Year 2035 plus Project Traffic Conditions

Existing Traffic
Table 17-2 presents pre-project (existing) traffic conditions in the project area. As of April of 2018, the intersection of Bryan Avenue and Ashlan Avenue exceeds its LOS threshold during the AM peak period.

Table 17-2
Existing Intersection LOS Results

ID	Intersection	Intersection Control	AM Peak Hour		PM Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	Grantland Avenue / Ashlan Avenue	One-Way Stop	11.4	B	10.7	B
2	Bryan Avenue / Ashlan Avenue	All-Way Stop	38.3	E	8.5	A
		All-Way Stop (Mitigated)	24.0	C	8.6	A
3	Grantland Avenue / Dakota Avenue	All-Way Stop (Mitigated)	N/A	N/A	N/A	N/A
4	Bryan Avenue / Dakota Avenue	Does Not Exist	N/A	N/A	N/A	N/A
5	Grantland Avenue / Project Driveway	Does Not Exist	N/A	N/A	N/A	N/A
6	Grantland Avenue / Shields Avenue	All-Way Stop	10.0	A	8.4	A
7	Grantland Avenue / Clinton Avenue	One-Way Stop	9.5	A	9.5	A

NOTE: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls.
LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.

Under this scenario, the intersection of Bryan Avenue and Ashlan Avenue exceed its LOS threshold during the AM peak period. To improve the LOS at this intersection, it is recommended that the following recommendations be implemented.

- Bryan Avenue and Ashlan Avenue
    - Modify the westbound through-right lane to a through lane; and
    - Add a westbound right-turn lane.

At present, all study segments operate at an acceptable LOS.

Existing Traffic Mitigation Measures: See Table 17-9 for a summary of

traffic/transportation mitigation measures.

Existing plus Project Scenario

Figure 4 of Appendix C illustrates the Existing plus Project turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Existing plus Project Traffic Conditions scenario are provided in Appendix F of Appendix C. Table 17-3 presents a summary of the Existing plus Project peak hour LOS at the study intersections, while Table 17-4 presents a summary of the Existing plus Project LOS for the study segments.

Table 17-3
Existing plus Project Intersection LOS Results

ID	Intersection	Intersection Control	AM Peak Hour		PM Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	Grantland Avenue / Ashlan Avenue	One-Way Stop	11.8	B	11.5	B
2	Bryan Avenue / Ashlan Avenue	All-Way Stop	41.6	E	8.8	A
		All-Way Stop (Mitigated)	27.1	D	8.8	A
3	Grantland Avenue / Dakota Avenue	One-Way Stop	10.6	B	10.4	B
4	Bryan Avenue / Dakota Avenue	Does Not Exist	N/A	N/A	N/A	N/A
5	Grantland Avenue / Project Driveway	One-Way Stop	9.1	A	9.5	A
6	Grantland Avenue / Shields Avenue	All-Way Stop	11.0	B	8.8	A
7	Grantland Avenue / Clinton Avenue	One-Way Stop	9.6	A	9.8	A

NOTE: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls. LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.

Table 17-4
Existing plus Project Segment LOS Results

ID	Segment	Limits	Lanes	24-hour Volume	LOS
1	Grantland Avenue	Ashlan Avenue and Dakota Avenue	2	3,983	B
2	Grantland Avenue	Dakota Avenue and Shields Avenue	2	3,903	B
3	Grantland Avenue	Shields Avenue and Clinton Avenue	2	2,394	B

NOTE: LOS = Level of Service per the Florida Roadway Segment LOS Tables.

Under this scenario, the intersection Bryan Avenue and Ashlan Avenue is projected to exceed its LOS threshold during the AM peak period. To improve the LOS at these intersections, it is recommended that the following improvements be implemented:

- Bryan Avenue and Ashlan Avenue
    - Modify the westbound through-right lane to a through lane;
    - Add a westbound right-turn lane; and
    - Modify the intersection to accommodate the added lane.

Under this scenario, all study segments are projected to operate at an acceptable LOS.

Existing plus Project Mitigation Measures: See Table 17-9 for a summary of

traffic/transportation mitigation measures.

Near Term plus Project Scenario

Approved and Pipeline Projects

The Near Term plus Project scenario includes the anticipated traffic impacts of approved (but not built) and pipeline projects. These are projects that are either under construction, built but not fully occupied, are not built but have final site development review (SDR) approval, or for which the lead agency or responsible agencies have knowledge of. The City of Fresno, County of Fresno and Caltrans staff were consulted throughout the preparation of the Traffic Impact Assessment regarding approved and/or known projects that could potentially impact the study intersections. JLB staff conducted a reconnaissance of the surrounding area to confirm the Near Term Projects. Subsequently, it was agreed that the projects listed in Table VIII of Appendix C were approved, near approval, or in the pipeline within the proximity of the proposed project.

The trip generation listed in Table VIII of Appendix C is that which anticipated to be added to the streets and highways by these projects between the time of the preparation of this report and five years from 2018. As shown in Table VIII, the total trip generation for the Near Term Projects is 53,404 daily trips, 4,071 AM peak hour trips, and 5,164 PM peak hour trips. Figure 5 of Appendix C illustrates the location of the approved, near approval, or pipeline projects and their combined trip assignment to the study intersections and segments under the Near Term No Project Traffic Conditions scenario.

Near Term plus Project Scenario

Figure 6 of Appendix C illustrates the Near Term plus Project turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Near Term plus Project Traffic Conditions scenario are provided in Appendix G of Appendix C. Table 17-5 presents a summary of the Near Term plus Project peak hour LOS at the study intersections, while Table 17-6 presents a summary of the Near Term plus Project LOS for the study segments.

Table 17-5
Near Term plus Project Intersection LOS Results

ID	Intersection	Intersection Control	AM Peak Hour		PM Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	Grantland Avenue / Ashlan Avenue	One-Way Stop	13.2	B	13.0	B
2	Bryan Avenue / Ashlan Avenue	All-Way Stop	>120.0	F	14.2	B
		All-Way Stop (Mitigated)	53.5	D	24.6	C
3	Grantland Avenue / Dakota Avenue	One-Way Stop	11.4	B	11.5	B
4	Bryan Avenue / Dakota Avenue	Does Not Exist	N/A	N/A	N/A	N/A
5	Grantland Avenue / Project Driveway	One-Way Stop	9.5	A	10.1	B
6	Grantland Avenue / Shields Avenue	All-Way Stop	12.9	B	9.7	A
7	Grantland Avenue / Clinton Avenue	One-Way Stop	9.8	A	9.8	A

NOTE: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls.
LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.

Table 17-6
Near Term plus Project Segment LOS Results

ID	Segment	Limits	Lanes	24-hour Volume	LOS
1	Grantland Avenue	Ashlan Avenue and Dakota Avenue	2	5,393	B
2	Grantland Avenue	Dakota Avenue and Shields Avenue	2	5,313	B
3	Grantland Avenue	Shields Avenue and Clinton Avenue	2	2,784	B

NOTE: LOS = Level of Service per the Florida Roadway Segment LOS Tables.

Under this scenario, the intersection of Bryan Avenue and Ashlan Avenue is projected to exceed its LOS threshold during the AM peak period. To improve the LOS at this intersection, it is recommended that this intersection be signalized with protective left-turn phasing in all directions.

Under this scenario, all study segments are projected to operate at an acceptable LOS.

Near Term plus Project Mitigation Measures: See Table 17-9 for a summary of traffic/transportation mitigation measures.

Cumulative Year 2035 plus Project Scenario

Figure 7 of Appendix C illustrates the Cumulative Year 2035 plus Project turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Cumulative Year 2035 plus Project Traffic Conditions scenario are provided in Appendix I of Appendix C. Table 17-7 presents a summary of the Cumulative Year 2035 plus Project peak hour LOS at the study intersections, while Table 17-8 presents a summary of the Cumulative Year 2035 plus Project LOS for the study segments.

Table 17-7
Cumulative Year 2035 plus Project Intersection LOS Results

ID	Intersection	Intersection Control	AM Peak Hour		PM Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	Ashlan Avenue / Grantland Avenue	Two-Way Stop	>120.0	F	>120.0	F
		Signalized (Mitigated)	50.7	D	41.5	D
2	Ashlan Avenue / Bryan Avenue	All-Way Stop	>120.0	F	22.8	C
		Signalized (Mitigated)	50.6	D	34.7	C
3	Dakota Avenue / Grantland Avenue	One-Way Stop	>120.0	F	>120.0	F
		Signalized (Mitigated)	20.4	C	10.1	B
4	Dakota Avenue / Bryan Avenue	Two-Way Stop	>120.0	F	106.5	F
		Signalized (Mitigated)	20.1	C	38.6	D
5	Project Driveway / Grantland Avenue	One-Way Stop	24.3	C	21.8	C
6	Shields Avenue / Grantland Avenue	All-Way Stop	>120.0	F	>120.0	F

		Signalized (Mitigated)	51.6	D	42.2	D
7	Clinton Avenue / Grantland Avenue	One-Way Stop	41.7	E	28.7	D
		One-Way Stop (Mitigated)	30.7	D	26.5	D

NOTE: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls.
LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.

Table 17-8
Cumulative Year 2035 plus Project Segment LOS Results

ID	Segment	Limits	Lanes	24-hour Volume	LOS
1	Grantland Avenue	Ashlan Avenue and Dakota Avenue	2	25,006	E
			4 (Mitigated)		C
2	Grantland Avenue	Dakota Avenue and Shields Avenue	2	22,800	E
			4 (Mitigated)		C
3	Grantland Avenue	Shields Avenue and Clinton Avenue	2	17,719	E
			4 (Mitigated)		B

NOTE: LOS = Level of Service per the Florida Roadway Segment LOS Tables.

Under this scenario, the intersections of Grantland Avenue and Ashlan Avenue, Bryan Avenue and Ashlan Avenue, Grantland Avenue and Dakota Avenue, Bryan Avenue and Dakota Avenue, Grantland Avenue and Shields Avenue, and Grantland Avenue and Clinton Avenue are projected to exceed their LOS threshold during one or both peak periods. To improve the LOS at the intersections projected to exceed their LOS threshold, it is recommended that the following improvements be implemented:

1. Grantland Avenue and Ashlan Avenue
    - Modify the northbound through-right lane to a right-turn lane;
    - Add a second southbound left-turn lane with a receiving lane east of Grantland Avenue;
    - Modify the southbound through-right lane to a through lane;
    - Add a second southbound through lane with a receiving lane south of Ashlan Avenue;
    - Add a southbound right-turn lane;
    - Implement overlap phasing of the southbound right-turn with the eastbound left-turn phase;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the added lanes.

2. Bryan Avenue and Ashlan Avenue
    - Modify the eastbound through-right lane to a through lane;
    - Add an eastbound right-turn lane;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the added lane.

3. Grantland Avenue and Dakota Avenue
    - Modify the northbound right-turn lane to a through-right lane with a receiving lane north of Dakota Avenue;
    - Add a second southbound through lane with a receiving lane south of Dakota Avenue; and
    - Modify the intersection to accommodate the added lanes.

4. Bryan Avenue and Dakota Avenue
    - Add an eastbound left-turn lane;
    - Modify the eastbound left-through-right lane to a through-right lane;
    - Add a westbound left-turn lane;
    - Modify the westbound left-through-right lane to a through-right lane;
    - Add a northbound left-turn lane;
    - Modify the northbound left-through-right lane to a through-right lane;
    - Add a southbound left-turn lane;
    - Modify the southbound left-through-right lane to a through-right lane;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the added lanes.

5. Grantland Avenue and Shields Avenue
    - Add an eastbound left-turn lane;
    - Modify the eastbound left-through-right lane to a through-right lane;
    - Add a westbound left-turn lane;
    - Modify the westbound left-through-right lane to a through lane;
    - Add a westbound right-turn lane;
    - Add a northbound left-turn lane;
    - Modify the northbound left-through-right lane to a through lane;
    - Add a northbound through-right lane with a receiving lane north of Shields Avenue;
    - Add a southbound left-turn lane;
    - Modify the southbound left-through-right lane to a through lane;
    - Add a second southbound through lane with a receiving lane south of Shields Avenue;
    - Add a southbound right-turn lane;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the added lanes.

6. Grantland Avenue and Clinton Avenue
    - Add a westbound left-turn lane; and
    - Modify the intersection to accommodate the added lane.

Under this scenario, the segments of Grantland Avenue between Ashlan Avenue and

Clinton Avenue are projected to operate at an unacceptable LOS. To improve the LOS of these segments, it is recommended that Grantland Avenue be modified to accommodate two lanes in each direction.

Cumulative Year 2035 plus Project Mitigation Measures: See Table 17-9 for a summary of traffic/transportation mitigation measures.

Project Mitigation Measures and Fair Share Calculations

The project's fair share percentage impact to study intersections project to fall below their LOS threshold and which are not covered by an existing impact fee program is provided in Table 17-9. The project's fair share percentage impacts were calculated pursuant to the Caltrans Guide for the Preparation of Traffic Impact Studies. The project's pro-rata fair shares were calculated utilizing the Existing volumes, 2035 Project Only Trips and Cumulative Year 2035 plus Project volumes. Since the critical peak period for the study facilities was determined to be during the PM peak, the PM peak volumes are utilized to determine the project's pro-rata fair share. The recommended improvements are as follows:

1. Grantland Avenue and Ashlan Avenue
    - Modify the northbound through-right lane to a right-turn lane;
    - Add a second southbound left-turn lane with a receiving lane east of Grantland Avenue;
    - Modify the southbound through-right lane to a through lane;
    - Add a second southbound through lane with a receiving lane south of Ashlan Avenue;
    - Add a southbound right-turn lane;
    - Implement overlap phasing of the southbound right-turn with the eastbound left-turn phase;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the added lanes.

2. Bryan Avenue and Ashlan Avenue
    - Modify the eastbound through-right lane to a through lane;
    - Add an eastbound right-turn lane;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the added lane.

3. Grantland Avenue and Dakota Avenue
    - Modify the northbound right-turn lane to a through-right lane with a receiving lane north of Dakota Avenue;
    - Add a second southbound through lane with a receiving lane south of Dakota Avenue; and
    - Modify the intersection to accommodate the added lanes.

4. Bryan Avenue and Dakota Avenue
    - Add an eastbound left-turn lane;
    - Modify the eastbound left-through-right lane to a through-right lane;
    - Add a westbound left-turn lane;
    - Modify the westbound left-through-right lane to a through-right lane;
    - Add a northbound left-turn lane;
    - Modify the northbound left-through-right lane to a through-right lane;
    - Add a southbound left-turn lane;
    - Modify the southbound left-through-right lane to a through-right lane;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the added lanes.

5. Grantland Avenue and Shields Avenue
    - Add an eastbound left-turn lane;
    - Modify the eastbound left-through-right lane to a through-right lane;
    - Add a westbound left-turn lane;
    - Modify the westbound left-through-right lane to a through lane;
    - Add a westbound right-turn lane;
    - Add a northbound left-turn lane;
    - Modify the northbound left-through-right lane to a through lane;
    - Add a northbound through-right lane with a receiving lane north of Shields Avenue;
    - Add a southbound left-turn lane;
    - Modify the southbound left-through-right lane to a through lane;
    - Add a second southbound through lane with a receiving lane south of Shields Avenue;
    - Add a southbound right-turn lane;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the added lanes.

6. Grantland Avenue and Clinton Avenue
    - Add a westbound left-turn lane; and
    - Modify the intersection to accommodate the added lane.

It is recommended that the project contribute its equitable fair share as listed in Table 17-9 for the future improvements necessary to maintain an acceptable LOS. However, fair share contributions should only be made for those facilities, or portion thereof, currently not funded by the responsible agencies roadway impact fee program(s) or grant funded projects, as appropriate. For those improvements not presently covered by local and regional roadway impact fee programs or grant funding, it is recommended that the project contribute its equitable fair share. Payment of the project's equitable fair share in addition to the local and regional impact fee programs would satisfy the

project's traffic mitigation measures.

It should be noted that CEQA Guidelines Section 15064.3 subdivision (b) is not applicable until July 1, 2020.

Table 17-9
Project Fair Share of Future Roadway Improvements

ID	Intersection	Existing Traffic Volumes (PM Peak)	Cumulative Year 2035 plus Project Traffic Volumes (PM Peak)	2035 Project Only Trips (PM Peak)	Project's Fair Share (%)
1	Grantland Avenue / Ashlan Avenue	514	3,133	63	2.41
2	Bryan Avenue / Ashlan Avenue	354	1,240	9	1.02
3	Grantland Avenue / Dakota Avenue	300	2,503	125	5.67
4	Bryan Avenue / Dakota Avenue	90	1,141	46	4.38
5	Grantland Avenue / Shields Avenue	428	2,553	63	2.96
6	Grantland Avenue / Clinton Avenue	265	1,607	54	4.02
ID	**Grantland Avenue between:**	**Existing Traffic Volumes (Daily)**	**Cumulative Year 2035 plus Project Traffic Volumes (Daily)**	**2035 Project Only Trips (Daily)**	**Project's Fair Share (%)**
1	Ashlan Avenue and Dakota Avenue	3,093	25,006	596	2.72
2	Dakota Avenue and Shields Avenue	3,093	22,800	330	1.67
3	Shields Avenue and Clinton Avenue	2,213	17,719	219	1.41

NOTE: Project Fair Share = ((2035 Project Only Trips / (Cumulative Year 2035 + Project Traffic Volumes – Existing Traffic Volumes)) x 100

Mitigation Measures

The project will be required to construct public road frontage as well as all on-site roadways. Table 17-9 presents the project's fair share percentage impact of the study intersections and segments at which the project will either cause or contribute to a significant impact which corresponds to the recommended improvements listed under the Cumulative Year 2035 with Project Scenario. These are included in Mitigation Measures TRA-1 and TRA-2.

Mitigation Measure TRA-1: The project shall pay into applicable transportation fee programs. These include a Fresno Major Street Impact Fee (FMSI), a Traffic Signal Mitigation Impact Fee (TSMI) and a Regional Transportation Mitigation Fee (RTMF). The FMSI Fee will be calculated and assessed during the building permit process. The RTMF will be calculated and assessed by Fresno COG.

Mitigation Measure TRA-2: The project will be responsible for paying its fair share cost percentages and/or constructing the recommended improvements identified in Table 17-9 (based on the Cumulative Year 2035 with Project PM Peak-hour impacts at project-impacted intersections) subject to reimbursement for the costs that are in excess of the project's equitable responsibility as determined by the City. This will be itemized and enforced through conditions of approval or a development agreement, at the

discretion of the City.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

All turns and access points within the subdivision provide low speed levels that require ease of turning for pedestrians in vehicles that would not substantially increase hazards due to a geometric design feature, such as dangerous intersections. The proposed project does not include any incompatible uses to a single-family residential subdivision, resulting in a *less than significant impact*.

d) Result in inadequate emergency access?

The proposed project includes one access point from North Grantland Avenue and one access point from West Dakota Avenue. Emergency vehicles would have access to the project site via the two access points, and emergency access would not be modified as a result of the proposed project. Therefore, the impact would be *less than significant*.

ENVIRONMENTAL ISSUES	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
XVII. TRIBAL CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:		X		
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC section 5020.1(k), or,		X		

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC section 5024.1. In applying the criteria set forth in subdivision (c) of PRC section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X		

DISCUSSION

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less than Significant with Mitigation Incorporation. The State requires lead agencies to consider the potential effects of proposed projects and consult with California Native American tribes during the local planning process for the purpose of protecting Traditional Tribal Cultural Resources through the CEQA Guidelines. Pursuant to PRC Section 21080.3.1, the lead agency shall begin consultation with the California Native American tribe that is traditionally and culturally affiliated with the geographical area of the proposed project. Such significant cultural resources are either sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a

tribe which is either on or eligible for inclusion in the California Historic Register or local historic register, or, the lead agency, at its discretion, and support by substantial evidence, choose to treat the resources as a Tribal Cultural Resources (PRC Section 21074(a)(1-2)).

Additional information may also be available from the California Native American Heritage Commission's Sacred Lands File per PRC Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that PRC Section 21082.3(c) contains provisions specific to confidentiality.

Pursuant to Senate Bill 18 (SB 18), Native American tribes traditionally and culturally affiliated with the project area were invited to consult regarding the project based on a list of contacts provided by the Native American Heritage Commission (NAHC). These tribes included: Big Sandy Rancheria; Cold Springs Rancheria; Dumna Wo Wah; the Dunlap Band of Mono Indians; the Kings River Choinumni Farm Tribe; Santa Rosa Rancheria; Table Mountain Rancheria; the Traditional Choinumni Tribe; and the Wuksache Indian Tribe.

Assembly Bill (AB) 52, which became law January 1, 2015, requires that, as part of the CEQA review process, public agencies provide early notice of a project to California Native American Tribes to allow for consultation between the tribe and the public agency. The purpose of AB 52 is to provide the opportunity for public agencies and tribes to consult and consider potential impacts to Tribal Cultural Resources (TCR's), as defined by the Public Resources Code (PRC) Section 2107(a). Under AB 52, public agencies shall reach out to California Native American Tribes who have requested to be notified of projects in areas within or which may have been affiliated with their tribal geographic range. Under invitations to consult under SB 18 and AB 52, no tribes elected to consult on the proposed project.

The site is currently vacant. While there is no evidence to suggest the presence of TCR's according to the Cultural Resource Assessment for Tract Map 6237 prepared by Precision Civil Engineering, Inc., the Table Mountain Rancheria declined to participate, but would appreciate being notified in the unlikely event that cultural resources are identified.

If any artifacts are inadvertently discovered during ground-disturbing activities, existing federal, State, and local laws and regulations would require construction activities to cease until such artifacts are properly examined and determined not to be of significance by a qualified cultural resources professional. In addition, GP MEIR Mitigation Measure CUL-1 included above in Section V, Cultural Resources, would apply to the project and requires that if unknown archaeological resources are discovered during construction, work in the area would halt and a qualified archaeologist would be contacted. Therefore, adherence to the requirements in GP

MEIR Mitigation Measure CUL-1 would reduce potential impacts to unknown archaeological historical resources to *less than significant with mitigation incorporation*.

Mitigation Measures

GP MEIR Mitigation Measure CUL-1 (See Section V, Cultural Resources)

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effect?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

DISCUSSION

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less than Significant Impact. The Department of Public Utilities has identified an existing 21-inch sewer main in West Dakota Avenue and a 60-inch sewer trunk in North Grantland Avenue that is suitable to serve the proposed project, subject to the payment of any applicable connection charges and/or fees and extension of services in a manner which is compliant with the Department of Public Utilities standards, specifications, and policies.

The Department of Public Utilities is requiring new construction of three 16-inch water mains be installed to suitably serve the project. The construction of the water mains will be subject to appropriate construction methods and permits required by the Department of Public Utilities and will not cause significant environmental effects, resulting in a *less than significant impact*.

Impacts to storm drainage facilities have been previously discussed in Section X, Hydrology and Water Quality, while the proposed project would result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of such facilities would not cause significant environmental effects because they will need to be constructed pursuant to FMFCD standards and approved by FMFCD.

The proposed project will not result in the construction of new facilities to meet electric power, natural gas or telecommunication needs presented by the addition of the project (other than what is necessary to connect to the existing facilities near the project site), resulting in a *less than significant impact* and will not cause significant environmental effects.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less than Significant Impact. Refer to Section X a) above for water supplies. The construction of new water utilities, subject to compliance with the City of Fresno Department of Public Utilities standards, will provide sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years resulting in a *less than significant impact*.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less than Significant Impact. The proposed project is not expected to exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board. The impact to storm drainage facilities will be *less than significant* given the developer will be required to provide drainage services and convey runoff to Master Plan Facilities. Development of the property requires compliance with grading and drainage standards of the City of Fresno and FMFCD.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less than Significant Impact. Garbage disposed of in the City of Fresno is taken to Cedar Avenue Recycling and Transfer Station. Once trash has been off-loaded at the transfer station, it is sorted and non-recyclable solid waste is loaded onto large trucks and taken to the American Avenue Landfill located approximately 6 miles southwest of Kerman.

The American Avenue Landfill (i.e. American Avenue Disposal Site 10-AA-0009) has a maximum permitted capacity of 32,700,000 cubic yards and a remaining capacity of 29,358,535 cubic yards, with an estimated closure date of August 31, 2031. The maximum permitted throughput is 2,200 tons per day.[5]

Other landfills within the County of Fresno include the Clovis Landfill (City of Clovis Landfill 10-AA-0004) with a maximum remaining permitted capacity of 7,740,000 cubic yards, a maximum permitted throughput of 2,000 tons per day, and an estimated closure date of 2031.[5]

[5] CalRecycle, https://www2.calrecycle.ca.gov/swfacilities/Directory/10-AA-0009, (accessed 03/13/2020).

Using California's Per Capita Disposal Rate Estimate[6] of 6.2 pounds per resident, per day, with a projected population of 356 residents (See Section XVI Recreation, b)), operation of the proposed project would generate approximately 2,207 pounds of solid waste per day or about 403 tons of solid waste per year. Given the available capacity at the landfills, the additional solid waste generated by the proposed project is not anticipated to cause the facility to exceed its daily permitted capacity. As such, the project would be served by a landfill with sufficient capacity to accommodate the project's waste disposal needs, and impacts associated with the disposition of solid waste would be *less than significant*.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than Significant Impact. The proposed Project would comply with all federal, State, and local solid waste statutes and/or regulations related to solid waste. Also refer to response to d) in this section. Therefore, the proposed Project would have a *less than significant impact* related to solid waste regulations.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. WILDFIRE – If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wldfire?				X

[6] California's 2017 Per Capita Disposal Rate Estimate, https://www.calrecycle.ca.gov/lgcentral/goalmeasure/disposalrate/mostrecent/ (accessed 03/13/2020).

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X

DISCUSSION

No Impact. As discussed above in discussion g) in Section IX, Hazards and Hazardous Materials, there are no very high fire hazard severity zones located within the City of Fresno.[7] Therefore, the proposed project would not expose people or structures to a significant loss, injury or death involving wildland fires and there would be *no impact*.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. MANDATORY FINDINGS OF SIGNIFICANCE				

[7] Cal Fire, 2008. *Fresno County Very High Fire Hazard Severity Zones in LRA.* June. https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/ (accessed 03/13/2020).

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

DISCUSSION

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or

eliminate important examples of the major periods of California history or prehistory?

Less than Significant with Mitigation Incorporation. With the incorporation of mitigation measures from MEIR Mitigation Checklist No. P18-01089/T-6237 and Project Specific Mitigation Checklist, development of the proposed project would not: 1) degrade the quality of the environment; 2) substantially reduce the habitat of a fish or wildlife species; 3) cause a fish or wildlife species population to drop below self-sustaining levels; 4) threaten to eliminate a plant or animal community; 5) reduce the number or restrict the range of a rare or endangered plant or animal; or 6) eliminate important examples of the major periods of California history. Therefore, this impact would be *less than significant with mitigation incorporation*.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Less than Significant Impact. CEQA Guidelines Section 15064(i) states that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probably future projects. Due to the nature of the project and consistency with environmental policies, incremental contributions to impacts are considered less than cumulatively considerable. All project-related impacts were determined to be either less than significant, or less than significant after mitigation. The proposed project would not contribute substantially to adverse cumulative conditions, or create any substantial indirect impacts (i.e., increase in population could lead to an increase need for housing, increase in traffic, air pollutants, etc.). As such, project impacts are not considered to be cumulatively considerable given the planned growth in the area and the insignificance of project-induced impacts. The impact is therefore *less than significant*.

c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant with Mitigation Incorporation. The analyses of environmental issues contained in this Initial Study indicate that the project is not expected to have substantial impact on human beings, either directly or indirectly. Mitigation measures have been incorporated in the project to reduce all potentially significant impacts to *less than significant*.

MEIR Mitigation Measure Monitoring Checklist for EA No. P18-01089/T-6237

Dated May 15, 2020

INCORPORATING MEASURES FROM THE MASTER ENVIRONMENTAL IMPACT REPORT (MEIR) CERTIFIED FOR THE CITY OF FRESNO GENERAL PLAN UPDATE (SCH No. 2012111015)

This mitigation measure monitoring and reporting checklist was prepared pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15097 and Section 21081.6 of the Public Resources Code (PRC). It was certified as part of the Fresno City Council's approval of the MEIR for the Fresno General Plan update (Fresno City Council Resolution 2014-225, adopted December 18, 2014).

Letter designations to the right of each MEIR mitigation measure listed in this Exhibit note how the mitigation measure relates to the environmental assessment of the above-listed project, according to the key found at right and at the bottoms of the following pages:

A - Incorporated into Project
B - Mitigated
C - Mitigation in Progress
D - Responsible Agency Contacted
E - Part of City-wide Program
F - Not Applicable

The timing of implementing each mitigation measure is identified in in the checklist, as well as identifies the entity responsible for verifying that the mitigation measures applied to a project are performed. Project applicants are responsible for providing evidence that mitigation measures are implemented. As lead agency, the City of Fresno is responsible for verifying that mitigation is performed/completed.

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Aesthetics:								
AES-1. Lighting systems for street and parking areas shall include shields to direct light to the roadway surfaces and parking areas. Vertical shields on the light fixtures shall also be used to direct light away from adjacent light sensitive land uses such as residences. **Verification comments:**	Prior to issuance of building permits	Public Works Department (PW) and Planning & Development Dept. (P-D)	**X**					
Aesthetics *(continued)*:								

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
AES-2: Lighting systems for public facilities such as active play areas shall provide adequate illumination for the activity; however, low intensity light fixtures and shields shall be used to minimize spillover light onto adjacent properties. **Verification comments:**	Prior to issuance of building permits	P-D	**X**					
AES-3: Lighting systems for non-residential uses, not including public facilities, shall provide shields on the light fixtures and orient the lighting system away from adjacent properties. Low intensity light fixtures shall also be used if excessive spillover light onto adjacent properties will occur. **Verification comments:**	Prior to issuance of building permits	P-D	**X**					
AES-4: Lighting systems for freestanding signs shall not exceed 100 foot Lamberts (FT-L) when adjacent to streets which have an average light intensity of less than 2.0 horizontal footcandles and shall not exceed 500 FT-L when adjacent to streets which have an average light intensity of 2.0 horizontal footcandles or greater. **Verification comments:**	Prior to issuance of building permits	P-D	**X**					

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Aesthetics *(continued)*:								
AES-5: Materials used on building facades shall be non-reflective. **Verification comments:**	Prior to development project approval	P-D	**X**					
Air Quality:								
AIR-1: Projects that include five or more heavy-duty truck deliveries per day with sensitive receptors located within 300 feet of the truck loading area shall provide a screening analysis to determine if the project has the potential to exceed criteria pollutant concentration based standards and thresholds for NO2 and PM2.5. If projects exceed screening criteria, refined dispersion modeling and health risk assessment shall be accomplished and if needed, mitigation measures to reduce impacts shall be included in the project to reduce the impacts to the extent feasible. Mitigation measures include but are not limited to: • Locate loading docks and truck access routes as far from sensitive receptors as reasonably possible considering site design limitations to comply with other City design standards. • Post signs requiring drivers to limit idling to 5 minutes or less. **Verification comments:**	Prior to development project approval	P-D						**X**

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Air Quality *(continued)*:								
AIR-2: Projects that result in an increased cancer risk of 10 in a million or exceed criteria pollutant ambient air quality standards shall implement site-specific measures that reduce toxic air contaminant (TAC) exposure to reduce excess cancer risk to less than 10 in a million. Possible control measures include but are not limited to: • Locate loading docks and truck access routes as far from sensitive receptors as reasonably possible considering site design limitations to comply with other City design standards. • Post signs requiring drivers to limit idling to 5 minutes or less • Construct block walls to reduce the flow of emissions toward sensitive receptors • Install a vegetative barrier downwind from the TAC source that can absorb a portion of the diesel PM emissions • For projects proposing to locate a new building containing sensitive receptors near existing sources of TAC emissions, install HEPA filters in HVAC systems to reduce TAC emission levels exceeding risk thresholds. • Install heating and cooling services at truck stops to eliminate the need for idling during overnight stops to run onboard systems. *(continued on next page)*	Prior to development project approval	P-D						X

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F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Air Quality *(continued)*:								
AIR-2 *(continued from previous page)* • For large distribution centers where the owner controls the vehicle fleet, provide facilities to support alternative fueled trucks powered by fuels such as natural gas or bio-diesel • Utilize electric powered material handling equipment where feasible for the weight and volume of material to be moved. **Verification comments:**	*[see previous page]*	*[see previous page]*						
AIR-3: Require developers proposing projects on ARB's list of projects in its Air Quality and Land Use Handbook (Handbook) warranting special consideration to prepare a cumulative health risk assessment when sensitive receptors are located within the distance screening criteria of the facility as listed in the ARB Handbook. **Verification comments:**	Prior to development project approval	P-D						**X**

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Air Quality *(continued)*:								
AIR-4: Require developers of projects containing sensitive receptors to provide a cumulative health risk assessment at project locations exceeding ARB Land Use Handbook distance screening criteria or newer criteria that may be developed by the San Joaquin Valley Air Pollution Control District (SJVAPCD). **Verification comments:**	Prior to development project approval	P-D						X
AIR-5: Require developers of projects with the potential to generate significant odor impacts as determined through review of SJVAPCD odor complaint history for similar facilities and consultation with the SJVAPCD to prepare an odor impact assessment and to implement odor control measures recommended by the SJVAPCD or the City to the extent needed to reduce the impact to less than significant. **Verification comments:**	Prior to development project approval	P-D						X

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Biological Resources:								
BIO-1: Construction of a proposed project should avoid, where possible, vegetation communities that provide suitable habitat for a special-status species known to occur within the Planning Area. If construction within potentially suitable habitat must occur, the presence/absence of any special-status plant or wildlife species must be determined prior to construction, to determine if the habitat supports any special-status species. If special-status species are determined to occupy any portion of a project site, avoidance and minimization measures shall be incorporated into the construction phase of a project to avoid direct or incidental take of a listed species to the greatest extent feasible. **Verification comments:**	Prior to development project approval	P-D	**X**					
BIO-2: Direct or incidental take of any state or federally listed species should be avoided to the greatest extent feasible. If construction of a proposed project will result in the direct or incidental take of a listed species, consultation with the resources agencies and/or additional permitting may be required. Agency consultation through the California Department of Fish and Wildlife (CDFW) 2081 and U.S. Fish and Wildlife Service (USFWS) Section 7 or Section 10 permitting processes must take place prior to any action that *(continued on next page)*	Prior to development project approval	P-D	**X**					

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Biological Resources *(continued)*:								
BIO-2 *(continued from previous page)* may result in the direct or incidental take of a listed species. Specific mitigation measures for direct or incidental impacts to a listed species will be determined on a case-by-case basis through agency consultation. **Verification comments:**	*[see previous page]*	*[see previous page]*						
BIO-3: Development within the Planning Area should avoid, where possible, special-status natural communities and vegetation communities that provide suitable habitat for special-status species. If a proposed project will result in the loss of a special-status natural community or suitable habitat for special-status species, compensatory habitat-based mitigation is required under CEQA and the California Endangered Species Act (CESA). Mitigation will consist of preserving on-site habitat, restoring similar habitat or purchasing off-site credits from an approved mitigation bank. Compensatory mitigation will be determined through consultation with the City and/or resource agencies. An appropriate mitigation strategy and ratio will be agreed upon by the developer and lead agency to reduce project impacts to special-status natural communities to a less than significant *(continued on next page)*	Prior to development project approval	P-D	**X**					

A - Incorporated into Project
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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F

Biological Resources *(continued)*:

BIO-3 *(continued from previous page)*: level. Agreed-upon mitigation ratios will depend on the quality of the habitat and presence/absence of a special-status species. The specific mitigation for project level impacts will be determined on a case-by-case basis. **Verification comments:**	*[see previous page]*	*[see previous page]*						
BIO-4: Proposed projects within the Planning Area should avoid, if possible, construction within the general nesting season of February through August for avian species protected under Fish and Game Code 3500 and the Migratory Bird Treaty Act (MBTA), if it is determined that suitable nesting habitat occurs on a project site. If construction cannot avoid the nesting season, a pre-construction clearance survey must be conducted to determine if any nesting birds or nesting activity is observed on or within 500-feet of a project site. If an active nest is observed during the survey, a biological monitor must be on site to ensure that no proposed project activities would impact the active nest. A suitable buffer will be established around the active nest until the nestlings have fledged and the nest is no longer active. Project activities *(continued on next page)*	Prior to development project approval and during construction activities	P-D	**X**					

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Biological Resources *(continued)*:								
BIO-4 *(continued from previous page)*: may continue in the vicinity of the nest only at the discretion of the biological monitor. **Verification comments:**	*[see previous page]*	*[see previous page]*						
BIO-5: If a proposed project will result in the removal or impact to any riparian habitat and/or a special-status natural community with potential to occur in the Planning Area, compensatory habitat-based mitigation shall be required to reduce project impacts. Compensatory mitigation must involve the preservation or restoration or the purchase of off-site mitigation credits for impacts to riparian habitat and/or a special-status natural community. Mitigation must be conducted in-kind or within an approved mitigation bank in the region. The specific mitigation ratio for habitat-based mitigation will be determined through consultation with the appropriate agency (*i.e.*, CDFW or USFWS) on a case-by-case basis. **Verification comments:**	Prior to development project approval	P-D						**X**

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Biological Resources *(continued)*:								
BIO-6: Project impacts that occur to riparian habitat may also result in significant impacts to streambeds or waterways protected under Section 1600 of Fish and Wildlife Code and Section 404 of the CWA. CDFW and/or USACE consultation, determination of mitigation strategy, and regulatory permitting to reduce impacts, as required for projects that remove riparian habitat and/or alter a streambed or waterway, shall be implemented. **Verification comments:**	Prior to development project approval	P-D						X
BIO-7: Project-related impacts to riparian habitat or a special-status natural community may result in direct or incidental impacts to special-status species associated with riparian or wetland habitats. Project impacts to special-status species associated with riparian habitat shall be mitigated through agency consultation, development of a mitigation strategy, and/or issuing incidental take permits for the specific special-status species, as determined by the CDFW and/or USFWS. **Verification comments:**	Prior to development project approval	P-D						X

A - Incorporated into Project
B - Mitigated
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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Biological Resources *(continued)*:								
BIO-8: If a proposed project will result in the significant alteration or fill of a federally protected wetland, a formal wetland delineation conducted according to U.S. Army Corps of Engineers (USACE) accepted methodology is required for each project to determine the extent of wetlands on a project site. The delineation shall be used to determine if federal permitting and mitigation strategy are required to reduce project impacts. Acquisition of permits from USACE for the fill of wetlands and USACE approval of a wetland mitigation plan would ensure a "no net loss" of wetland habitat within the Planning Area. Appropriate wetland mitigation/creation shall be implemented in a ratio according to the size of the impacted wetland. **Verification comments:**	Prior to development project approval	P-D						**X**
BIO-9: In addition to regulatory agency permitting, Best Management Practices (BMPs) identified from a list provided by the USACE shall be incorporated into the design and construction phase of the project to ensure that no pollutants or siltation drain into a federally protected wetland. Project design features such as fencing, appropriate drainage and *(continued on next page)*	Prior to development project approval; but for long-term operational BMPs, prior to issuance of occupancy	P-D						**X**

A - Incorporated into Project
B - Mitigated
C - Mitigation in Process
D - Responsible Agency Contacted
E - Part of City-Wide Program
F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Biological Resources *(continued)*:								
BIO-9 *(continued from previous page)*: incorporating detention basins shall assist in ensuring project-related impacts to wetland habitat are minimized to the greatest extent feasible. **Verification comments:**	*[see previous page]*	*[see previous page]*						
Cultural Resources:								
CUL-1: If previously unknown resources are encountered before or during grading activities, construction shall stop in the immediate vicinity of the find and a qualified historical resources specialist shall be consulted to determine whether the resource requires further study. The qualified historical resources specialist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines and the City's Historic Preservation Ordinance. If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the monitor and *(continued on next page)*	Prior to commencement of, and during, construction activities	P-D	**X**					

A - Incorporated into Project
B - Mitigated
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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F

Cultural Resources *(continued)*:

CUL-1 *(continued from previous page)* recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these. Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-germ preservation to allow future scientific study. **Verification comments:**	*[see previous page]*	*[see previous page]*						
CUL-2: Subsequent to a preliminary City review of the project grading plans, if there is evidence that a project will include excavation or construction activities within previously undisturbed soils, a field survey and literature search for prehistoric archaeological resources shall be conducted. The following procedures shall be followed. If prehistoric resources are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that buried prehistoric *(continued on next page)*	Prior to commencement of, and during, construction activities	P-D	**X**					

A - Incorporated into Project
B - Mitigated
C - Mitigation in Process
D - Responsible Agency Contacted
E - Part of City-Wide Program
F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F

Cultural Resources *(continued)*:

CUL-2 *(continued from previous page)* archaeological resources are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with CEQA Guidelines Section 15064.5. If the resources are determined to be unique prehistoric archaeological resources as defined under Section 15064.5 of the CEQA Guidelines, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any prehistoric archaeological artifacts recovered as a result of mitigation shall be provided *(continued on next page)*	*[see previous page]*	*[see previous page]*	

A - Incorporated into Project
B - Mitigated
C - Mitigation in Process
D - Responsible Agency Contacted
E - Part of City-Wide Program
F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F

Cultural Resources *(continued)*:

CUL-2 *(further continued from previous two pages)* to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study. If prehistoric resources are found during the field survey or literature review, the resources shall be inventoried using appropriate State record forms and submit the forms to the Southern San Joaquin Valley Information Center. The resources shall be evaluated for significance. If the resources are found to be significant, measures shall be identified by the qualified archaeologist. Similar to above, appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. In addition, appropriate mitigation for excavation and construction activities in the vicinity of the resources found during the field survey or literature review shall include an archaeological monitor. The monitoring period shall be determined by the qualified archaeologist. If additional prehistoric archaeological resources are found during *(continued on next page)*	*[see Page 14]*	*[see Page 14]*	

Cultural Resources *(continued)*:

A - Incorporated into Project
B - Mitigated
C - Mitigation in Process
D - Responsible Agency Contacted
E - Part of City-Wide Program
F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
CUL-2 *(further continued from previous three pages)* excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed. **Verification comments:**	*[see Page 14]*	*[see Page 14]*						
CUL-3: Subsequent to a preliminary City review of the project grading plans, if there is evidence that a project will include excavation or construction activities within previously undisturbed soils, a field survey and literature search for unique paleontological/geological resources shall be conducted. The following procedures shall be followed: If unique paleontological/geological resources are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that unique paleontological/geological resources are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find and a qualified paleontologist shall be consulted to determine whether the resource requires further study. The qualified paleontologist shall make recommendations to the City on the measures that shall be implemented to protect the discovered *(continued on next page)*	Prior to commencement of, and during, construction activities	P-D	**X**					

A - Incorporated into Project
B - Mitigated
C - Mitigation in Process
D - Responsible Agency Contacted
E - Part of City-Wide Program
F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
CUL-3 *(continued from previous page)* resources, including but not limited to, excavation of the finds and evaluation of the finds. If the resources are determined to be significant, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any paleontological/geological resources recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study. If unique paleontological/geological resources are found during the field survey or literature review, the resources shall be inventoried and evaluated for significance. If the resources are found to be significant, mitigation measures shall be identified by the qualified paleontologist. Similar to above, appropriate mitigation measures for significant resources could include avoidance or capping, incorporation of the site in green space, parks, or open space, or data recovery excavations of the finds. In addition, appropriate mitigation for excavation and construction activities in the vicinity of the *(continued on next page)*	*[see previous page]*	*[see previous page]*						

A - Incorporated into Project
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F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F

Cultural Resources *(continued)*:

CUL-3 *(further continued from previous two pages)* resources found during the field survey or literature review shall include a paleontological monitor. The monitoring period shall be determined by the qualified paleontologist. If additional paleontological/geological resources are found during excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed. **Verification comments:**	*[see Page 17]*	*[see Page 17]*						
CUL-4: In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most *(continued on next page)*	Prior to commencement of, and during, construction activities	P-D	**X**					

A - Incorporated into Project
B - Mitigated
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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F

Cultural Resources *(continued)*:

CUL-4 *(continued from previous page)* likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains. Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment. **Verification comments:**	*[see previous page]*	*[see previous page]*	

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Hazards and Hazardous Materials								
HAZ-1: Re-designate the existing vacant land proposed for low density residential located northwest of the intersection of East Garland Avenue and North Dearing Avenue and located within Fresno Yosemite International Airport Zone 1-RPZ, to Open Space. **Verification comments:**	Prior to development approvals	P-D						X
HAZ-2: Limit the proposed low density residential (1 to 3 dwelling units per acre) located northwest of the airport, and located within Fresno Yosemite International Airport Zone 3-Inner Turning Area, to 2 dwelling units per acre or less. **Verification comments:**	Prior to development approvals	P-D						X
HAZ-3: Re-designate the current area within Fresno Yosemite International Airport Zone 5-Sideline located northeast of the airport to Public Facilities-Airport or Open Space. **Verification comments:**	Prior to development approvals	P-D						X

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F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Hazards and Hazardous Materials *(continued)*:								
HAZ-4: Re-designate the current vacant lots at the northeast corner of Kearney Boulevard and South Thorne Avenue to Public Facilities-Airport or Open Space. **Verification comments:**	Prior to development approvals	P-D						X
HAZ-5: Prohibit residential uses within Safety Zone 1 northwest of the Hawes Avenue and South Thorne Avenue intersection. **Verification comments:**	Prior to development approvals	P-D						X
HAZ-6: Establish an alternative Emergency Operations Center in the event the current Emergency Operations Center is under redevelopment or blocked. **Verification comments:**	Prior to redevelopment of the current Emergency Operations Center	Fresno Fire Department and Mayor/ City Manager's Office						X

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F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Hydrology and Water Quality								
HYD-1: The City shall develop and implement water conservation measures to reduce the per capita water use to 215 gallons per capita per day. **Verification comments:**	Prior to water demand exceeding water supply	Department of Public Utilities (DPU)					X	
HYD-2: The City shall continue to be an active participant in the Kings Water Authority and the implementation of the Kings Basin IRWMP. **Verification comments:**	Ongoing	DPU					X	
HYD-5.1: The City and partnering agencies shall implement the following measures to reduce the impacts on the capacity of existing or planned storm drainage Master Plan collection systems to less than significant. • Implement the existing Storm Drainage Master Plan (SDMP) for collection systems in drainage areas where the amount of imperviousness is unaffected by the change in land uses. *(continued on next page)*	Prior to exceedance of capacity of existing stormwater drainage facilities	Fresno Metropolitan Flood Control District (FMFCD), P-D, and PW				X	X	

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F

Hydrology and Water Quality *(continued)*:

HYD-5.1 *(continued from previous page)* • Update the SDMP in those drainage areas where the amount of imperviousness increased due to the change in land uses to determine the changes in the collection systems that would need to occur to provide adequate capacity for the stormwater runoff from the increased imperviousness. • Implement the updated SDMP to provide stormwater collection systems that have sufficient capacity to convey the peak runoff rates from the areas of increased imperviousness. Require developments that increase site imperviousness to install, operate, and maintain FMFCD approved on-site detention systems to reduce the peak runoff rates resulting from the increased imperviousness to the peak runoff rates that will not exceed the capacity of the existing stormwater collection systems. **Verification comments:**	*[see previous page]*	*[see previous page]*	

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E - Part of City-Wide Program
F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Hydrology and Water Quality *(continued)*:								
HYD-5.2: The City and partnering agencies shall implement the following measures to reduce the impacts on the capacity of existing or planned storm drainage Master Plan retention basins to less than significant: Consult the SDMP to analyze the impacts to existing and planned retention basins to determine remedial measures required to reduce the impact on retention basin capacity to less than significant. Remedial measures would include: • Increase the size of the retention basin through the purchase of more land or deepening the basin or a combination for planned retention basins. • Increase the size of the emergency relief pump capacity required to pump excess runoff volume out of the basin and into adjacent canal that convey the stormwater to a disposal facility for existing retention basins. • Require developments that increase runoff volume to install, operate, and maintain, Low Impact Development (LID) measures to reduce runoff volume to the runoff volume that will not exceed the capacity of the existing retention basins. **Verification comments:**	Prior to exceedance of capacity of existing retention basin facilities	FMFCD, P-D, and PW				X	X	

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B - Mitigated
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D - Responsible Agency Contacted
E - Part of City-Wide Program
F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Hydrology and Water Quality *(continued)*:								
HYD-5.3: The City and partnering agencies shall implement the following measures to reduce the impacts on the capacity of existing or planned storm drainage Master Plan urban detention (stormwater quality) basins to less than significant. Consult the SDMP to determine the impacts to the urban detention basin weir overflow rates and determine remedial measures required to reduce the impact on the detention basin capacity to less than significant. Remedial measures would include: • Modify overflow weir to maintain the suspended solids removal rates adopted by the FMFCD Board of Directors. • Increase the size of the urban detention basin to increase residence time by purchasing more land. The existing detention basins are already at the adopted design depth. • Require developments that increase runoff volume to install, operate, and maintain, Low Impact Development (LID) measures to reduce peak runoff rates and runoff volume to the runoff rates and volumes that will not exceed the weir overflow rates of the existing urban detention basins. **Verification comments:**	Prior to exceedance of capacity of existing urban detention basin (stormwater quality) facilities	FMFCD, P-D, and PW				X	X	

A - Incorporated into Project
B - Mitigated
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D - Responsible Agency Contacted
E - Part of City-Wide Program
F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F

Hydrology and Water Quality *(continued)*:

HYD-5.4: The City shall implement the following measures to reduce the impacts on the capacity of existing or planned storm drainage Master Plan pump disposal systems to less than significant. • Consult the SDMP to determine the extent and degree to which the capacity of the existing pump system will be exceeded. • Require new developments to install, operate, and maintain FMFCD design standard on-site detention facilities to reduce peak stormwater runoff rates to existing planned peak runoff rates. • Provide additional pump system capacity to maximum allowed by existing permitting to increase the capacity to match or exceed the peak runoff rates determined by the SDMP. **Verification comments:**	Prior to exceedance of capacity of existing pump disposal systems	FMFCD, P-D, and PW				X	X	

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B - Mitigated
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F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Hydrology and Water Quality *(continued)*:								
• **HYD-5.5:** The City shall work with FMFCD to develop and adopt an update to the SDMP for the Southeast Development Area that would be adequately designed to collect, convey and dispose of runoff at the rates and volumes which would be generated by the planned land uses in that area. **Verification comments:**	Prior to development approvals in the Southeast Development Area	FMFCD, P-D, and PW						X
Public Services:								
PS-1: As future fire facilities are planned, the fire department shall evaluate if specific environmental effects would occur. Typical impacts from fire facilities include noise, traffic, and lighting. Typical mitigation to reduce these impacts includes: • *Noise:* Barriers and setbacks on the fire department sites. • *Traffic:* Traffic devices for circulation and a "keep clear zone" during emergency responses. • *Lighting:* Provision of hoods and deflectors on lighting fixtures on the fire department sites. **Verification comments:**	During the planning process for future fire department facilities	P-D				X	X	

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F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Public Services *(continued)*:								
PS-2: As future police facilities are planned, the police department shall evaluate if specific environmental effects would occur. Typical impacts from police facilities include noise, traffic, and lighting. Typical mitigation to reduce potential impacts from police department facilities includes: • *Noise:* Barriers and setbacks on the police department sites. • *Traffic:* Traffic devices for circulation. • *Lighting:* Provision of hoods and deflectors on lighting fixtures on the police department sites. **Verification comments:**	During the planning process for future Police Department facilities	P-D					X	
PS-3: As future public and private school facilities are planned, school districts shall evaluate if specific environmental effects would occur with regard to public schools, and P-D shall evaluate other school facilities. Typical impacts from school facilities include noise, traffic, and lighting. Typical mitigation to reduce potential impacts from school facilities includes: *(continued on next page)*	During the planning process for future school facilities	P-D, local school districts, and the Division of the State Architect				X	X	

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F

Public Services *(continued)***:**

PS-3 *(continued from previous page)* • *Noise*: Barriers and setbacks placed on school sites. • *Traffic*: Traffic devices for circulation. • *Lighting*: Provision of hoods and deflectors on lighting fixtures for stadium lights. **Verification comments:**	*[see previous page]*	*[see previous page]*						
PS-4: As future parks and recreational facilities are planned, the City shall evaluate if specific environmental effects would occur. Typical impacts from school facilities include noise, traffic, and lighting. Typical mitigation to reduce potential impacts from park and recreational facilities includes: • *Noise*: Barriers and setbacks placed on school sites. • *Traffic*: Traffic devices for circulation. • *Lighting*: Provision of hoods and deflectors on lighting fixtures for outdoor play area/field lights. **Verification comments:**	During the planning process for future park and recreation facilities	P-D						**X**

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E - Part of City-Wide Program
F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Public Services *(continued)*:								
PS-5: As future detention, court, library, and hospital facilities are planned, the appropriate agencies shall evaluate if specific environmental effects would occur. Typical impacts from court, library, and hospital facilities include noise, traffic, and lighting. Typical mitigation to reduce potential impacts includes: • *Noise:* Barriers and setbacks placed on school sites. • *Traffic:* Traffic devices for circulation. • *Lighting:* Provision of hoods and deflectors on outdoor lighting fixtures. **Verification comments:**	During the planning process for future detention, court, library, and hospital facilities	P-D, to the extent that agencies constructing these facilities are subject to City of Fresno regulation						X
Utilities and Service Systems								
USS-1: The City shall develop and implement a wastewater master plan update. **Verification comments:**	Prior to wastewater conveyance and treatment demand exceeding capacity	DPU					X	

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F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Utilities and Service Systems *(continued)*:								
USS-2: Prior to exceeding existing wastewater treatment capacity, the City shall evaluate the wastewater system and shall not approve additional development that contributes wastewater to the wastewater treatment facility that could exceed capacity until additional capacity is provided. By approximately the year 2025, the City shall construct the following improvements: • Construct an approximately 70 MGD expansion of the Regional Wastewater Treatment and Reclamation Facility and obtain revised waste discharge permits as the generation of wastewater is increased. • Construct an approximately 0.49 MGD expansion of the North Facility and obtain revised waste discharge permits as the generation of wastewater is increased. **Verification comments:**	Prior to exceeding existing wastewater treatment capacity	DPU					X	
USS-3: Prior to exceeding existing wastewater treatment capacity, the City shall evaluate the wastewater system and shall not approve additional development that contributes wastewater to the wastewater treatment facility that could exceed capacity until additional capacity is provided. After *(continued on next page)*	Prior to exceeding existing wastewater treatment capacity	DPU					X	

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Utilities and Service Systems *(continued)*:								
USS-3 *(continued from previous page)* approximately the year 2025, the City shall construct the following improvements: • Construct an approximately 24 MGD wastewater treatment facility within the Southeast Development Area and obtain revised waste discharge requirements as the generation of wastewater is increased. • Construct an approximately 9.6 MGD expansion of the Regional Wastewater Treatment and Reclamation Facility and obtain revised waste discharge permits as the generation of wastewater is increased. **Verification comments:**	*[see previous page]*	*[see previous page]*						
USS-4: A Traffic Control/Traffic Management Plan to address traffic impacts during construction of water and sewer facilities shall be prepared and implemented, subject to approval by the City (and Fresno County, when work is being done in unincorporated area roadways). The plan shall identify access and parking restrictions, pavement markings and signage, and hours of construction and for deliveries. It shall include haul routes, the notification plan, and coordination with emergency service providers and schools. **Verification comments:**	Prior to construction of water and sewer facilities	PW for work in the City; PW and Fresno County Public Works and Planning when unincorporated area roadways are involved					X	

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Utilities and Service Systems *(continued)*:								
USS-5: Prior to exceeding capacity within the existing wastewater collection system facilities, the City shall evaluate the wastewater collection system and shall not approve additional development that would generate additional wastewater and exceed the capacity of a facility until additional capacity is provided. By approximately the year 2025, the following capacity improvements shall be provided. • Orange Avenue Trunk Sewer: This facility shall be improved between Dakota and Jensen Avenues. Approximately 37,240 feet of new sewer main shall be installed and approximately 5,760 feet of existing sewer main shall be rehabilitated. The size of the new sewer main shall range from 27 inches to 42 inches in diameter. The associated project designations in the 2006 Wastewater Master Plan are RS03A, RL02, C01-REP, C02-REP, C03-REP, C04-REP, C05-REP, C06-REL and C07-REP. • Marks Avenue Trunk Sewer: This facility shall be improved between Clinton Avenue and Kearney Boulevard. Approximately 12,150 feet of new sewer main shall be installed. The size of the new sewer main shall range from 33 inches to 60 inches in diameter. The associated project designations in the 2006 Wastewater Master Plan are CM1-REP and CM2-REP. *(continued on next page)*	Prior to exceeding capacity within the existing wastewater collection system facilities	DPU					X	

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F

Utilities and Service Systems *(continued)*:

USS-5 *(continued from previous page)* • North Avenue Trunk Sewer: This facility shall be improved between Polk and Fruit Avenues and also between Orange and Maple Avenues. Approximately 25,700 feet of new sewer main shall be installed. The size of the new sewer main shall range from 48 inches to 66 inches in diameter. The associated project designations in the 2006 Wastewater Master Plan are CN1-REL1 and CN3-REL1. • Ashlan Avenue Trunk Sewer: This facility shall be improved between Hughes and West Avenues and also between Fruit and Blackstone Avenues. Approximately 9,260 feet of new sewer main shall be installed. The size of the new sewer main shall range from 24 inches to 36 inches in diameter. The associated project designations in the 2006 Wastewater Master Plan are CA1-REL and CA2-REP. **Verification comments:**	*[see previous page]*	*[see previous page]*	

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F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Utilities and Service Systems *(continued)*:								
USS-6: Prior to exceeding capacity within the existing 28 pipeline segments shown in Figures 1 and 2 in Appendix J-1, the City shall evaluate the wastewater collection system and shall not approve additional development that would generate additional wastewater and exceed the capacity of one of the 28 pipeline segments until additional capacity is provided. **Verification comments:**	Prior to exceeding capacity within the existing 28 pipeline segments shown in Figures 1 and 2 in Appendix J-1 of the MEIR	DPU					X	
USS-7: Prior to exceeding existing water supply capacity, the City shall evaluate the water supply system and shall not approve additional development that demand additional water until additional capacity is provided. By approximately the year 2025, the following capacity improvements shall be provided. • Construct an approximately 80 million gallon per day (MGD) surface water treatment facility near the intersection of Armstrong and Olive Avenues, in accordance with Chapter 9 and Figure 9-1 of the City of Fresno Metropolitan Water Resources Management Plan Update (2014 Metro Plan Update) Phase 2 Report, dated January 2012. *(continued on next page)*	Prior to exceeding existing water supply capacity	DPU					X	

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F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Utilities and Service Systems *(continued)*:								
USS-7 *(continued from previous page)* • Construct an approximately 30 MGD expansion of the existing northeast surface water treatment facility for a total capacity of 60 MGD, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. • Construct an approximately 20 MGD surface water treatment facility in the southwest portion of the City, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. **Verification comments:**	*[see previous page]*	*[see previous page]*						
USS-8: Prior to exceeding capacity within the existing water conveyance facilities, the City shall evaluate the water conveyance system and shall not approve additional development that would demand additional water and exceed the capacity of a facility until additional capacity is provided. The following capacity improvements shall be provided by approximately 2025. • Construct 65 new groundwater wells, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. *(continued on next page)*	Prior to exceeding capacity within the existing water conveyance facilities	DPU					X	

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Utilities and Service Systems *(continued)*:								
USS-8 *(continued from previous page)* • Construct a 2.0 million gallon potable water reservoir (Reservoir T2) near the intersection of Clovis and California Avenues, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. • Construct a 3.0 million gallon potable water reservoir (Reservoir T3) near the intersection of Temperance and Dakota Avenues, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. • Construct a 3.0 million gallon potable water reservoir (Reservoir T4) in the Downtown Planning Area, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. • Construct a 4.0 million gallon potable water reservoir (Reservoir T5) near the intersection of Ashlan and Chestnut Avenues, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. • Construct a 4.0 million gallon potable water reservoir (Reservoir T6) near the intersection of Ashlan Avenue and Highway 99, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. *(continued on next page)*	*[see previous page]*	*[see previous page]*						

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F

Utilities and Service Systems *(continued)*:

USS-8 *(continued from previous two pages)* • Construct 50.3 miles of regional water transmission mains ranging in size from 24-inch to 48-inch diameter, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. • Construct 95.9 miles of 16-inch diameter transmission grid mains, in accordance with Chapter 9 and Figure 9-1 of the 2014 Metro Plan Update. **Verification comments:**	*[see Page 37]*	*[see Page 37]*						
USS-9: Prior to exceeding capacity within the existing water conveyance facilities, the City shall evaluate the water conveyance system and shall not approve additional development that would demand additional water and exceed the capacity of a facility until additional capacity is provided. The following capacity improvements shall be provided after approximately the year 2025 and additional water conveyance facilities shall be provided prior to exceedance of capacity within the water conveyance facilities to accommodate full buildout of the General Plan Update. *(continued on next page)*	Prior to exceeding capacity within the existing water conveyance facilities	DPU					X	

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F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Utilities and Service Systems *(continued)*:								
USS-9 *(continued from previous page)* • Construct a 4.0 million gallon potable water reservoir (SEDA Reservoir 1) within the northern part of the Southeast Development Area. • Construct a 4.0 million gallon potable water reservoir (SEDA Reservoir 2) within the southern part of the Southeast Development Area. Additional water conveyance facilities shall be provided prior to exceedance of capacity within the water conveyance facilities to accommodate full buildout of the General Plan Update. **Verification comments:**	*[see previous page]*	*[see previous page]*						
Utilities and Service Systems - *Hydrology and Water Quality*								
USS-10: In order to maintain Fresno Irrigation District canal operability, FMFCD shall maintain operational intermittent flows during the dry season, within defined channel capacity and downstream capture capabilities, for recharge. **Verification comments:**	During the dry season	Fresno Irrigation District (FID)					X	

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F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Utilities and Service Systems - *Biological Resources:*								
USS-11: When FMFCD proposes to provide drainage service outside of urbanized areas: (a) FMFCD shall conduct preliminary investigations on undeveloped lands outside of highly urbanized areas. These investigations shall examine wetland hydrology, vegetation and soil types. These preliminary investigations shall be the basis for making a determination on whether or not more in-depth wetland studies shall be necessary. If the proposed project site does not exhibit wetland hydrology, support a prevalence of wetland vegetation and wetland soil types then no further action is required. (b) Where proposed activities could have an impact on areas verified by the Corps as jurisdictional wetlands or waters of the U.S. (urban and rural streams, seasonal wetlands, and vernal pools), FMFCD shall obtain the necessary Clean Water Act, Section 404 permits for activities where fill material shall be placed in a wetland, obstruct the flow or circulation of waters of the United States, impair or reduce the reach of such waters. As part of FMFCD's Memorandum of Understanding with CDFG, Section 404 and 401 permits would be obtained from the U.S. Army Corps of Engineers and from the *(continued on next page)*	Prior to development approvals outside of highly urbanized areas	California Regional Water Quality Control Board (RWQCB), and USACE						X

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F

Utilities and Service Systems - *Biological Resources* *(continued)**:***

USS-11 *(continued from previous page)* Regional Water Quality Control Board for any activity involving filling of jurisdictional waters). At a minimum, to meet "no net loss policy," the permits shall require replacement of wetland habitat at a 1**:**1 ratio. (c) Where proposed activities could have an impact on areas verified by the Corps as jurisdictional wetlands or waters of the U.S. (urban and rural streams, seasonal wetlands, and vernal pools), FMFCD shall submit and implement a wetland mitigation plan based on the wetland acreage verified by the U.S. Army Corps of Engineers. The wetland mitigation plan shall be prepared by a qualified biologist or wetland scientist experienced in wetland creation, and shall include the following or equally effective elements: i. Specific location, size, and existing hydrology and soils within the wetland creation area. ii. Wetland mitigation techniques, seed source, planting specifications, and required buffer setbacks. In addition, the mitigation plan shall ensure adequate water supply is provided to the created wetlands in order to maintain the proper *(continued on next page)*	*[see previous page]*	*[see previous page]*	

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F

Utilities and Service Systems - *Biological Resources* *(continued)**:***

USS-11 *(continued from previous two pages)* hydrologic regimes required by the different types of wetlands created. Provisions to ensure the wetland water supply is maintained in perpetuity shall be included in the plan. iii. A monitoring program for restored, enhanced, created, and preserved wetlands on the project site. A monitoring program is required to meet three objectives; 1) establish a wetland creation success criteria to be met; 2) to specify monitoring methodology; 3) to identify as far as is possible, specific remedial actions that will be required in order to achieve the success criteria; and 4) to document the degree of success achieved in establishing wetland vegetation. (d) A monitoring plan shall be developed and implemented by a qualified biologist to monitor results of any on-site wetland restoration and creation for five years. The monitoring plan shall include specific success criteria, frequency and timing of monitoring, and assessment of whether or not maintenance activities are being carried out and how these shall be adjusted if necessary. *(continued on next page)*	*[see Page 41]*	*[see Page 41]*	

A - Incorporated into Project
B - Mitigated
C - Mitigation in Process
D - Responsible Agency Contacted
E - Part of City-Wide Program
F - Not Applicable

MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F

Utilities and Service Systems - *Biological Resources* *(continued)**:***

USS-11 *(continued from previous three pages)* If monitoring reveals that success criteria are not being met, remedial habitat creation or restoration should be designed and implemented by a qualified biologist and subject to five years of monitoring as described above. Or (e) In lieu of developing a mitigation plan that outlines the avoidance, purchase, or creation of wetlands, FMFCD could purchase mitigation credits through a Corps approved Mitigation Bank. **Verification comments:**	*[see Page 41]*	*[see Page 41]*						
USS-12: When FMFCD proposes to provide drainage service outside in areas that support seasonal wetlands or vernal pools: (a) During facility design and prior to initiation of ground disturbing activities in areas that support seasonal wetlands or vernal pools, FMFCD shall conduct a preliminary rare plant assessment. The assessment will determine the likelihood on whether or not the project site could support rare plants. If it is determined that the project site would not support rare plants, then no further *(continued on next page)*	During facility design and prior to initiation of ground disturbing activities in areas that support seasonal wetlands or vernal pools	California Department of Fish & Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS)						X

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F

Utilities and Service Systems - *Biological Resources* *(continued)**:***

USS-12 *(continued from previous page)* action is required. However, if the project site has the potential to support rare plants; then a rare plant survey shall be conducted. Rare plant surveys shall be conducted by qualified biologists in accordance with the most current CDFG/USFWS guidelines or protocols and shall be conducted at the time of year when the plants in question are identifiable. (b) Based on the results of the survey, prior to design approval, FMFCD shall coordinate with CDFG and/or implement a Section 7 consultation with USFWS, shall determine whether the project facility would result in a significant impact to any special status plant species. Evaluation of project impacts shall consider the following: • The status of the species in question (*e.g.*, officially listed by the State or Federal Endangered Species Acts). • The relative density and distribution of the on-site occurrence versus typical occurrences of the species in question. *(continued on next page)*	*[see previous page]*	*[see previous page]*	

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F

Utilities and Service Systems - *Biological Resources* *(continued)***:**

USS-12 *(continued from previous two pages)* • The habitat quality of the on-site occurrence relative to historic, current or potential distribution of the population. (c) Prior to design approval, and in consultation with the CDFG and/or the USFWS, FMFCD shall prepare and implement a mitigation plan, in accordance with any applicable State and/or federal statutes or laws, that reduces impacts to a less than significant level. **Verification comments:**	*[see Page 44]*	*[see Page 44]*						
USS-13: When FMFCD proposes to provide drainage service outside in areas that support seasonal wetlands or vernal pools: (a) During facility design and prior to initiation of ground disturbing activities in areas that support seasonal wetlands or vernal pools, FMFCD shall conduct a preliminary survey to determine the presence of listed vernal pool crustaceans. *(continued on next page)*	During facility design and prior to initiation of ground disturbing activities in areas that support seasonal wetlands or vernal pools	CDFW and USFWS						**X**

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D - Responsible Agency Contacted
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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F

Utilities and Service Systems - *Biological Resources* *(continued)***:**

USS-13 *(continued from previous page)* (b) If potential habitat (vernal pools, seasonally inundated areas) or fairy shrimp exist within areas proposed to be disturbed, FMFCD shall complete the first and second phase of fairy shrimp presence or absence surveys. If an absence finding is determined and accepted by the USFWS, then no further mitigation shall be required for fairy shrimp. (c) If fairy shrimp are found to be present within vernal pools or other areas of inundation to be impacted by the implementation of storm drainage facilities, FMFCD shall mitigate impacts on fairy shrimp habitat in accordance with the USFWS requirements of the Programmatic Biological Opinion. This shall include on-site or off-site creation and/or preservation of fairy shrimp habitat at ratios ranging from 3:1 to 5:1 depending on the habitat impacted and the choice of on-site or off-site mitigation. Or mitigation shall be the purchase of mitigation credit through an accredited mitigation bank. **Verification comments:**	*[see previous page]*	*[see previous page]*	

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Utilities and Service Systems - *Biological Resources* *(continued)*:								
USS-14: When FMFCD proposes to construct drainage facilities in an area where elderberry bushes may occur: (a) During facility design and prior to initiation of construction activities, FMFCD shall conduct a project-specific survey for all potential Valley Elderberry Longhorn Beetle (VELB) habitats (elderberry shrubs), including a stem count and an assessment of historic or current VELB habitat. (b) FMFCD shall avoid and protect all potential identified VELB habitat where feasible. (c) Where avoidance is infeasible, develop and implement a VELB mitigation plan in accordance with the most current USFWS mitigation guidelines for unavoidable take of VELB habitat pursuant to either Section 7 or Section 10(a) of the Federal Endangered Species Act. The mitigation plan shall include, but might not be limited to, relocation of elderberry shrubs, planting of elderberry shrubs, and monitoring of relocated and planted elderberry shrubs. **Verification comments:**	During facility design and prior to initiation of construction activities	CDFW and USFWS						X

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Utilities and Service Systems - *Biological Resources* *(continued)*:								
USS-15: Prior to ground disturbing activities during nesting season (March through July) for a project that supports bird nesting habitat, FMFCD shall conduct a survey of trees. If nests are found during the survey, a qualified biologist shall assess the nesting activity on the project site. If active nests are located, no construction activities shall be allowed within 250 feet of the nest until the young have fledged. If construction activities are planned during the no n-breeding period (August through February), a nest survey is not necessary. **Verification comments:**	Prior to ground disturbing activities during nesting season (March through July) for a project that supports bird nesting habitat	CDFW and USFWS						X
USS-16: When FMFCD proposes to construct drainage facilities in an area that supports bird nesting habitat: (a) FMFCD shall conduct a pre-construction breeding-season survey (approximately February 1 through August 31) of proposed project sites in suitable habitat (levee and canal berms, open grasslands with suitable burrows) during the same calendar year that construction is planned to begin. If phased construction procedures are planned for the proposed project, the results of the above survey shall be valid only for the season when it is conducted. *(continued on next page)*	Prior to ground disturbing activities during nesting season (March through July) for a project that supports bird nesting habitat	CDFW and USFWS						X

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Utilities and Service Systems - *Biological Resources* *(continued)*:								
USS-16 *(continued from previous page)* (b) During the construction stage, FMFCD shall avoid all burrowing owl nest sites potentially disturbed by project construction during the breeding season while the nest is occupied with adults and/or young. The occupied nest site shall be monitored by a qualified biologist to determine when the nest is no longer used. Avoidance shall include the establishment of a 160-foot diameter non-disturbance buffer zone around the nest site. Disturbance of any nest sites shall only occur outside of the breeding season and when the nests are unoccupied based on monitoring by a qualified biologist. The buffer zone shall be delineated by highly visible temporary construction fencing. Based on approval by CDFG, pre-construction and pre-breeding season exclusion measures may be implemented to preclude burrowing owl occupation of the project site prior to project-related disturbance. Burrowing owls can be passively excluded from potential nest sites in the construction area, either by closing the burrows or placing one-way doors in the burrows according to current CDFG protocol. Burrows shall be examined not more than 30 days before construction to ensure that no owls have recolonized the area of construction. *(continued on next page)*	*[see previous page]*	*[see previous page]*						

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F

Utilities and Service Systems - *Biological Resources* *(continued)***:**

USS-16 *(continued from previous two pages)* For each burrow destroyed, a new burrow shall be created (by installing artificial burrows at a ratio of 2:1 on protected lands nearby. **Verification comments:**	*[see Page 49]*	*[see Page 49]*						
USS-17: When FMFCD proposes to construct drainage facilities in the San Joaquin River corridor: (a) FMFCD shall not conduct instream activities in the San Joaquin River between October 15 and April 15. If this is not feasible, FMFCD shall consult with the National Marine Fisheries Service and CDFW on the appropriate measures to be implemented in order to protect listed salmonids in the San Joaquin River. (b) Riparian vegetation shading the main–channel that is removed or damaged shall be replaced at a ratio and quantity sufficient to maintain the existing shading of the channel. The location of replacement trees on or within *(continued on next page)*	During instream activities conducted between October 15 and April 15	National Marine Fisheries Service (NMFS), CDFW, and Central Valley Flood Protection Board (CVFPB)						**X**

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F

Utilities and Service Systems / *Biological Resources* *(continued)***:**

USS-17 *(continued from previous page)* FMFCD berms, detention ponds or river channels shall be approved by FMFCD and the Central Valley Flood Protection Board. **Verification comments:**	*[see previous page]*	*[see previous page]*						

Utilities and Service Systems – *Recreation / Trails*:

USS-18: When FMFCD updates its District Service Plan: Prior to final design approval of all elements of the District Services Plan, FMFCD shall consult with Fresno County, City of Fresno, and City of Clovis to determine if any element would temporarily disrupt or permanently displace adopted existing or planned trails and associated recreational facilities as a result of the proposed District Services Plan. If the proposed project would not temporarily disrupt or permanently displace adopted existing or planned trails, no further mitigation is necessary. If the proposed project would have an effect on the trails and associated facilities, FMFCD shall implement the following: *(continued on next page)*	Prior to final design approval of all elements of the District Services Plan	P-D, PW, City of Clovis, and County of Fresno				**X**		

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Utilities and Service Systems – *Recreation / Trails* *(continued)***:**								
USS-18 *(continued from previous page)* (a) If short-term disruption of adopted existing or planned trails and associated recreational facilities occur, FMFCD shall consult and coordinate with Fresno County, City of Fresno, and City of Clovis to temporarily re-route the trails and associated facilities. (b) If permanent displacement of the adopted existing or planned trails and associated recreational facilities occur, the appropriate design modifications to prevent permanent displacement shall be implemented in the final project design or FMFCD shall replace these facilities. **Verification comments:**	*[see previous page]*	*[see previous page]*						
Utilities and Service Systems – *Air Quality*:								
USS-19: When District drainage facilities are constructed, FMFCD shall: (a) Minimize idling time of construction equipment vehicles to no more than ten minutes, or require that engines be shut off when not in use. *(continued on next page)*	During storm water drainage facility construction activities	Fresno Metropolitan Flood Control District and SJVAPCD				**X**		

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Utilities and Service Systems – *Air Quality* *(continued)*:								
USS-19 *(continued from previous page)* (b) Construction shall be curtailed as much as possible when the Air Quality Index (AQI) is above 150. AQI forecasts can be found on the SJVAPCD web site. (c) Off-road trucks should be equipped with on-road engines if possible. (d) Construction equipment should have engines that meet the current off-road engine emission standard (as certified by CARB), or be re-powered with an engine that meets this standard. **Verification comments:**	*[see previous page]*	*[see previous page]*						
Utilities and Service Systems – *Adequacy of Storm Water Drainage Facilities*:								
USS-20: Prior to exceeding capacity within the existing storm water drainage facilities, the City shall coordinate with FMFCD to evaluate the storm water drainage system and shall not approve additional development that would convey additional storm water to a facility that would experience an exceedance of capacity until the necessary additional capacity is provided. **Verification comments:**	Prior to exceeding capacity within the existing storm water drainage facilities	FMFCD, PW, and P-D				X	X	

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MITIGATION MEASURE	WHEN IMPLEMENTED	COMPLIANCE VERIFIED BY	A	B	C	D	E	F
Utilities and Service Systems – *Adequacy of Water Supply Capacity*:								
USS-21: Prior to exceeding existing water supply capacity, the City shall evaluate the water supply system and shall not approve additional development that demand additional water until additional capacity is provided. By approximately the year 2025, the City shall construct an approximately 25,000 AF/year tertiary recycled water expansion to the Fresno-Clovis Regional Wastewater Reclamation Facility in accordance with the 2013 Recycled Water Master Plan and the 2014 City of Fresno Metropolitan Water Resources Management Plan update. Implementation of Mitigation Measure USS-5 is also required prior to approximately the year 2025. **Verification comments:**	Prior to exceeding existing water supply capacity	DPU and P-D				X	X	
Utilities and Service Systems – *Adequacy of Landfill Capacity*:								
USS-22: Prior to exceeding landfill capacity, the City shall evaluate additional landfill locations and shall not approve additional development that could contribute solid waste to a landfill that is at capacity until additional capacity is provided. **Verification comments:**	Prior to exceeding landfill capacity	DPU and P-D					X	

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CITY OF FRESNO
MITIGATED NEGATIVE DECLARATION
PROJECT SPECIFIC MITIGATION MONITORING CHECKLIST
ENVIRONMENTAL ASSESSMENT NO. P18-01089/T-6237

Project/EA No. **P18-01089/T-6237** Date: May 15, 2020

	Mitigation Measure	Implemented By	When Implemented	Verified By
	AG-1. In order to reduce potential conflicts between urban and agricultural uses, the following measures shall be implemented: • Potential residents shall be notified about possible exposure to agricultural chemicals at the time of purchase/lease of property within the development. • A Right-to-Farm Covenant shall be recorded on each tract map or be made a condition of each tract map to protect continued agricultural practices in the area. • Potential residents shall be informed of the Right-to-Farm Covenant at the time of purchase/lease of property within the development.			Planning & Development Department (P-D)
	HYDRO-1. To minimize any potential short-term water quality effects from project-related construction activities, the project contractor shall implement Best Management Practices (BMPs) in conformance with the California Storm Water Best Management Practice Handbook for Construction Activity. In addition, the proposed project shall be in compliance with existing regulatory requirements, including the Water Pollution Control Preparation (WPCP) Manual. In addition, implementation of a Storm Water Pollution Prevention Plan (SWPPP) would be required under the National Pollutant Discharge Elimination System (NPDES) to regulate water quality associated with construction activities.		During construction	P-D, Fresno Metropolitan Flood Control District (FMFCD)
	HYDRO-2. To reduce the potential for degradation of surface water quality during project operation, prior to issuance of building permits, the project applicant shall develop BMPs consistent with NPDES municipal separate storm sewer system permit (MS4 Permit) to minimize stormwater pollution resulting from the proposed project. Specifically, source control measures, treatment controls, and BMP maintenance requirements shall be identified and described to ensure that the project complies with post-construction stormwater management requirements of the MS4 permit.		Prior to issuance of building permits	P-D, FMFCD

CITY OF FRESNO
MITIGATED NEGATIVE DECLARATION
PROJECT SPECIFIC MITIGATION MONITORING CHECKLIST
ENVIRONMENTAL ASSESSMENT NO. P18-01089/T-6237

Project/EA No. **P18-01089/T-6237** Date: May 15, 2020

	Mitigation Measure	Implemented By	When Implemented	Verified By
	NOI-1. Install an 8-foot block wall or combination of block wall and landscape berm to a total of 8 feet in height along North Grantland Avenue, and the north (West Dakota Avenue) and south property lines extending 420 feet from the center line of North Grantland Avenue. Refer to Exhibit 1 in Appendix B for specifics on wall location and length.		Prior to final occupancy of homes.	P-D
	NOI-2. Install a 6-foot wooden fence with ½-inch thick wood slats on both sides and staggered so that there is no direct view through the fence and should extend 150 feet east starting from where the sound wall ends along the northern and southern property lines. Refer to Exhibit 1 in Appendix B for specifics on wall location and length.		Prior to final occupancy of homes.	P-D
	NOI-3. If a second floor is built for any house(s) on lots along North Grantland Avenue, additional design criteria shall be included in the homes to account for needing a dB reduction of at least 20.7 dB. Standards and recommendations for noise reduction can be implemented as follows: Reduction of relative window area, providing acoustical glazing (e.g. thicker glass or increased air space between panes) within frames with low air infiltration rates, fixed acoustical glazing, increasing wall mass (e.g. using stucco or brick in lieu of wood siding), isolating wall members by using double or staggered stud walls, reducing door area, installation of solid-core doors, sealing door perimeters with suitable gaskets, and/or installing plywood sheathing under roofing materials.		Prior to issuance of a building permit.	P-D
	NOI-4. Lots 1-3 on West Fedora Avenue will require additional building requirements for the first and second floor as follows: Reduction of relative window area, providing acoustical glazing (e.g. thicker glass or increased air space between panes) within frames with low air infiltration rates, fixed acoustical glazing, increasing wall mass (e.g. using stucco or brick in lieu of wood siding), isolating wall members by using double or staggered stud walls, reducing door area, installation of solid-core doors, sealing door perimeters with suitable gaskets, and/or installing plywood sheathing under roofing materials.		Prior to issuance of a building permit.	P-D

CITY OF FRESNO
MITIGATED NEGATIVE DECLARATION
PROJECT SPECIFIC MITIGATION MONITORING CHECKLIST
ENVIRONMENTAL ASSESSMENT NO. P18-01089/T-6237

Project/EA No. **P18-01089/T-6237** Date: May 15, 2020

	Mitigation Measure	Implemented By	When Implemented	Verified By
	PUB-1. The project applicant shall pay development impact fees for police, fire, recreation, and other public services as determined by the City of Fresno.		Prior to final occupancy of homes.	City-wide
	TRA-1. The project shall pay into applicable transportation fee programs. These include a Fresno Major Street Impact Fee (FMSI), a Traffic Signal Mitigation Impact Fee (TSMI) and a Regional Transportation Mitigation Fee (RTMF). The FMSI Fee will be calculated and assessed during the building permit process. The RTMF will be calculated and assessed by Fresno COG.		Prior to final occupancy of homes.	Department of Public Works (DPW)
	TRA-2. The project will be responsible for paying its fair share cost percentages and/or constructing the recommended improvements identified in Table 17-9 (based on the Cumulative Year 2035 with Project PM Peak-hour impacts at project-impacted intersections) subject to reimbursement for the costs that are in excess of the project's equitable responsibility as determined by the City. This will be itemized and enforced through conditions of approval or a development agreement, at the discretion of the City.		Prior to final occupancy of homes.	DPW

Appendix A
Biological Reconnaissance Survey

601 Pollasky Avenue, Suite 301 | Clovis, CA 93612

November 8, 2019

Jeff Roberts
Assemi Group, Inc.
1396 W. Herndon Ave, Suite 110
Fresno, CA 93711

Subject: Summary of a Biological Reconnaissance Survey Conducted for the Assemi Group, Tract 6237 Tentative Tract Map Project, Fresno, California

Dear Mr. Roberts:

This letter details the results of the reconnaissance level biological survey conducted for the Tract 6237 Tentative Tract Map Project. The Assemi group is planning to develop a residential subdivision on the east side of E. Grantland Ave. The 28.26-acre site consists of two parcels (APNs: 512-14-133 and 512-14-047) which would be rezoned from multi-family to single-family residential designation and annexed by the City of Fresno. This reconnaissance survey was conducted to identify any sensitive resources present on or near the site and to evaluate potential impacts to those resources.

Project Setting

The center of the Project is located along East Grantland Avenue near the western edge of the City of Fresno (Figures 1 and 2 in Appendix A). The Project is south of Ashlan Avenue and north of Shields Avenue. The site is surrounded by a matrix of agriculture, open lands, light industry, and private residences. A portion of the land to the east of the Project is an inactive vineyard overgrown with weedy species. The rest of the land east of the Project is open land with a mix of ruderal species and non-native grasses. Active orchard lands lie to the west of the site. The northern portion of the Project is adjacent to an industrial facility and the southern border of the Project abuts a small private residence. Another private residence is present on the western edge of the site, on a small rectangular parcel (Figure 3 in Appendix A). That property is not affiliated with the Project.

Methods

Prior to visiting the site, a review of literature and database resources was conducted to determine the potential for sensitive biological resources to occur on or near the Project. A California Natural Diversity Database (CNDDB) query was run to obtain information on sensitive species known to occur within ten miles of the Project. Likewise, National Hydrography Dataset (NHD) and National Wetlands Inventory (NWI) data was reviewed to assess the potential for aquatic resources to be present (Figure 4 in Appendix A). On the morning of November 6, 2019, QK Associate Environmental Scientist, Dylan Ayers, visited the Project site. Mr. Ayers conducted pedestrian transects throughout the area to ensure sufficient visual coverage of the survey area. The survey examined the Project site as well as areas within a 500-foot survey buffer established around the site (Figure 5 in Appendix A).

Results of Literature and Database Review

The CNDDB query revealed multiple records of sensitive species occurring within 10 miles of the Project. Bird species included the Swainson's Hawk (*Buteo swainsoni),* burrowing owl *(Athene cunicularia),* and tri-colored blackbird *(Ageleius tricolor).* Mammal species include the San Joaquin kit fox (*Vulpes macrotis mutica),* San Joaquin pocket mouse (*Perognathus inornatus),* and Fresno kangaroo rat *(Dipodomys nitratoides exilis).* Other species of animals include the California tiger salamander (*Ambystoma californiense),* vernal pool fairy shrimp (*Branchinecta lynchi),* and western spadefoot toad (*Spea hammondii).* The CNDDB query did not show any species records occurring on or directly adjacent to the Project.

The site sits in an area of Fresno that has not been subject to heavy urban development. Historic imagery (Google, 2019) shows that the Project site and surrounding areas have been consistently farmed and used for various agricultural and industrial purposes since at least 1998, leaving almost no natural, undeveloped lands in the general vicinity of the site that might be utilized by special-status animal species. The Project site does not contain any riparian habitat, other sensitive habitats, or wildlife corridors. NHD and NWI data indicate that no aquatic resources are known to occur near the Project, and this was verified by the site visit.

Site Visit

The entire Project site is currently an active almond orchard (Photographs 1 and 2 in Appendix B). Mr. Ayers walked the edges of the site and entered areas that were within the 500-foot survey buffer when access was feasible. Binoculars were used to visually scan areas that were not accessible. The orchard appears to be well-maintained. Exposed soils were hard and compact with little to no vegetation present except for the nut trees (Photograph 16 in Appendix B). The limited vegetation on-site consisted of scattered non-native species such as filaree (*Erodium botrys)* and oat grass (*Avena fatua).* Most vegetation that has not already been removed is dead or dying. There was no indication that the site was being used by any special status species that was identified in the CNDDB query. Most of the habitat on- and off-site is heavily impacted by the agricultural activities, leaving limited environments for wildlife to forage or find shelter. Wildlife species richness and abundance was extremely low in the area.

Although almost no suitable habitat is found within the Project site, some areas of better, yet still low quality, are located offsite, mainly to the east (Photographs 4 and 5 in Appendix B). One red-tailed hawk pair was observed on the eastern edge of the site which abuts fallow agricultural lands. The pair appeared to be foraging. The fallow lands in the vicinity of the Project provide foraging habitat for this pair of hawks and other local bird species. No raptor nest was observed in the area. Small mammal burrows were observed mostly along the edges of the Project site, but burrows were most commonly observed near fallow fields and straddling the fence line (Figure 5 in Appendix A, Photograph 10 in Appendix B). The majority of the small mammal burrows appeared to be active. Some burrows were large, in excess of 6 inches at the entrances. Most burrows appeared to have been used by California ground squirrels (*Otospermophilus beecheyi*) for multiple seasons (Photograph 7 in

Appendix B). Animal sign in the vicinity of these burrows was limited to ground squirrel and other small mammal paw prints, but in three locations along the southern edge of the Project, canine scat was observed, which indicates the presence of either domestic dog or coyote, both of which would be expected to occur.

Applicable County of Fresno General Plan Goals and Policies

The Open Space and Conservation element in the *Fresno County General Plan* lists goals meant to ensure that natural resources and open spaces are preserved in the County during urban development. Goals OS-D, OS-E, and OS-F establish policies for the protection of plant and animal species, wetlands, waters, and wildlife habitats in Fresno County. (Fresno County, 2000). Developers should avoid net loss of important wildlife habitats and the species they support through the implementation of the policies described under each goal. Based on the findings detailed in this letter report, this Project would not conflict with any of the above goals and their policies. No sensitive plant or animal species were detected during the November 2019 site survey and the site does not contain any wetland, riparian, or other aquatic resources that could potentially be impacted during development of the site. A change in zoning from multi-family residences to single family residences would have no substantial changes on associated impacts to biological resources.

If you have any questions, please contact Dylan Ayers or Curtis Uptain at (559) 733-0440.

Sincerely,

Dylan Ayers
Associate Environmental Scientist

Curtis Uptain
Senior Environmental Scientist

Enclosures: Attachment A: Figures
Attachment B: Photographs

190364/
DA/ CU

REFERENCES

County of Fresno (Fresno County). 2000. Fresno County General Plan Policy Document, Published October 3, 2000

Google Earth 2019. (Google) Tract 6237, 36.784853, -119.914081. Historical Imagery Layer (1998-2018), viewed November 6, 2019

ATTACHMENT A

FIGURES

Figure 1
Regional Map, Tract 6237, Tentative Tract Map Project,
Fresno, California

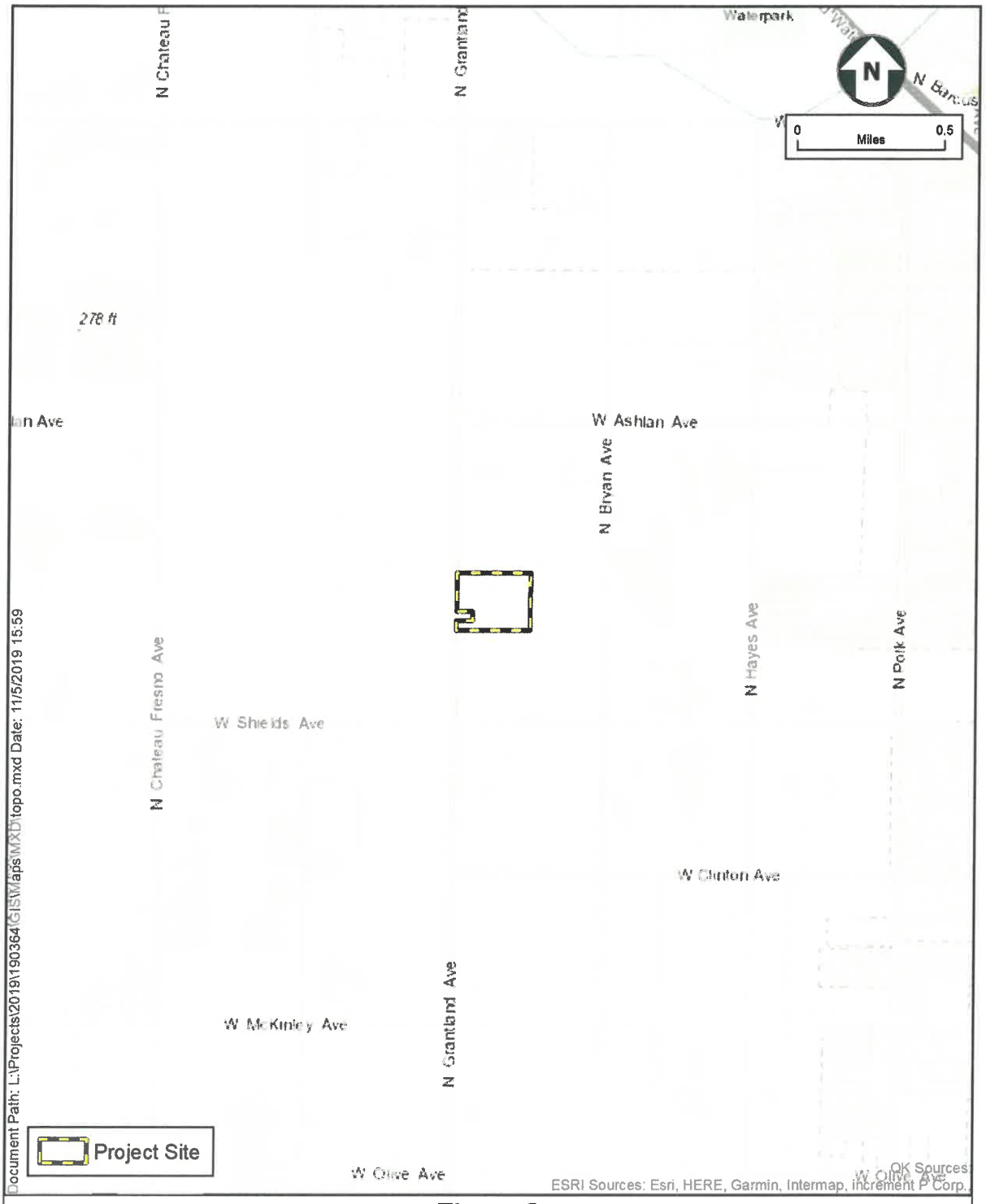


Figure 2
Vicinity Map, Tract 6237, Tentative Tract Map Project, Fresno, California

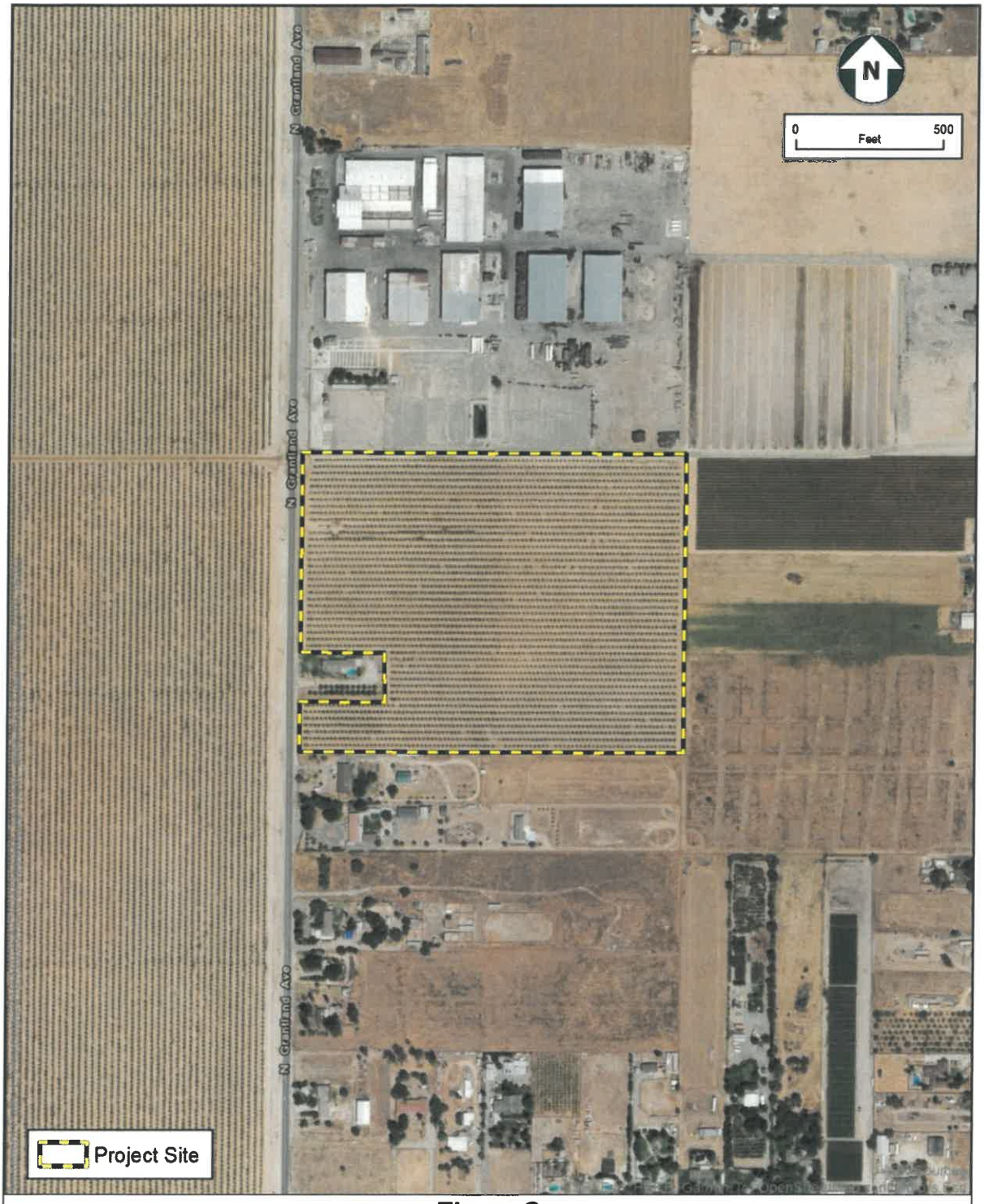


Figure 3
Project Site Map, Tract 6237, Tentative Tract Map Project, Fresno, California

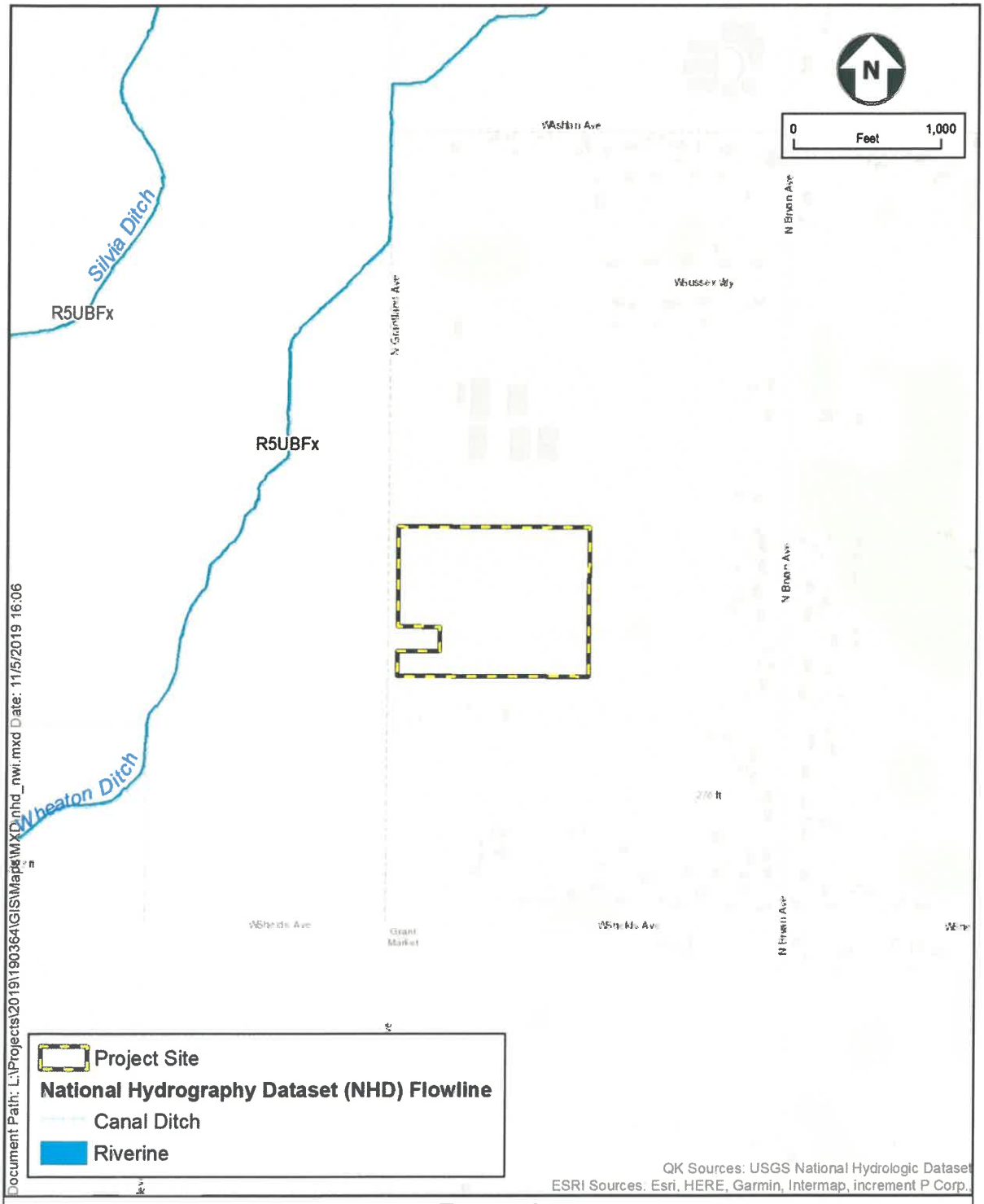


Figure 4
NHD NWI Map, Tract 6237, Tentative Tract Map Project, Fresno, California

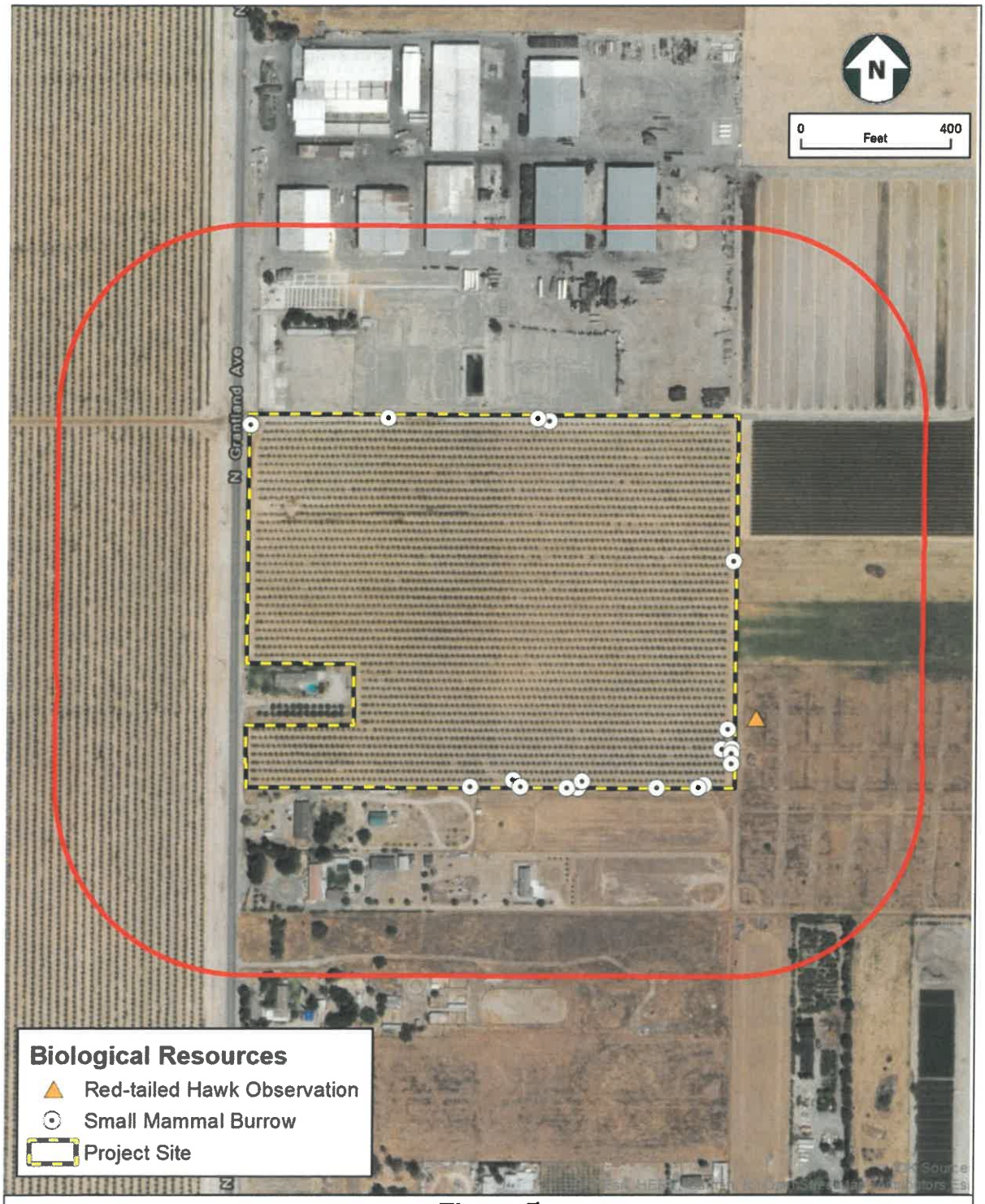


Figure 5
Biological Resources at Tract 6237, Tentative Tract Map Project, Fresno, California

ATTACHMENT B

PHOTOGRAPHS

Photograph 1: Aerial view of Project site, taken from above industrial facility to north of site
36.787113, -119.911796, facing southwest
Photograph taken by Dylan Ayers on November 07, 2019.

Photograph 2: Aerial view of Project site taken from orchard to west of site.
36.782997, -119.917307, facing northeast
Photograph taken by Dylan Ayers on November 07, 2019.

Photograph 3: Aerial view of empty industrial yard adjacent to north border of Project
36.786299, -119.911849, facing north
Photograph taken by Dylan Ayers on November 07, 2019.

Photograph 4: Aerial view of inactive vineyard to east of site.
36.785808, -119.912224, facing north
Photograph taken by Dylan Ayers on November 07, 2019.

Photograph 5: Aerial view of eastern edge of Project site with inactive vineyard and open lands pictured.
36.782634, -119.911916, facing northwest
Photograph taken by Dylan Ayers on November 07, 2019.

Photograph 6: Aerial view of orchard taken from northeastern corner of site.
36.786299, -119.911851, facing northwest
Photograph taken by Dylan Ayers on November 07, 2019.

Photograph 7: View of small mammal burrow located near entrance gate at northwest corner of site.
36.786119, -119.916197, facing north
Photograph taken by Dylan Ayers on November 07, 2019.

Photograph 8: View of small mammal burrow excavated near almond tree.
36.783511, -119.913803, facing northeast
Photograph taken by Dylan Ayers on November 07, 2019.

Photograph 9: View of small mammal burrow on dirt road on northern border of site.
36.783494, -119.912072, facing southwest
Photograph taken by Dylan Ayers on November 07, 2019.

Photograph 10: View of burrow complex on southern edge of Project site.
36.783472, -119.912131, facing southwest
Photograph taken by Dylan Ayers on November 07, 2019.

Photograph 11: View of dirt road running along southern edge of Project site.
36.783472, -119.915725, facing east
Photograph taken by Dylan Ayers on November 07, 2019.

Photograph 12: View of dirt road on eastern edge of Project site.
36.785264, -119.911875, facing north
Photograph taken by Dylan Ayers on November 07, 2019.

Photograph 13: View of western edge of Project site adjacent to Grantland Ave.
36.783897, -119.916253, facing south
Photograph taken by Dylan Ayers on November 07, 2019.

Photograph 14: View of industrial site to the north of the Project site.
36.786119, -119.916139, facing northeast
Photograph taken by Dylan Ayers on November 07, 2019.

Photograph 15: View of ag-related containers near of western edge of Project site.
36.785517, -119.916111, facing east
Photograph taken by Dylan Ayers on November 07, 2019.

Photograph 16: View of mature almond tree row.
36.785247, -119.911875, facing north
Photograph taken by Dylan Ayers on November 07, 2019.

Appendix B
Acoustical Analysis Report

ACOUSTICAL ANALYSIS

TRACT 6237
APN: 512-141-33, 47
SE CORNER OF N. GRANTLAND AVE
AND W. DAKOTA AVE
FRESNO, CALIFORNIA

PREPARED FOR
GRANVILLE HOMES
1396 W HERNDON ST #101
FRESNO, CA 93711

PREPARED BY
RHETT WINTERTON
PRECISION CIVIL ENGINEERING, INC.
1234 "O' STREET
FRESNO, CA 93721

DATE:
JUNE 19, 2019

PRECISION
CIVIL ENGINEERING, INC

Contents

1. INTRODUCTION

The proposed project consist of 116-lot residential subdivision located on the East side of Grantland Avenue, and South of Dakota Avenue in Fresno, California and further identified as APN 512-141-33, 47 as shown in Figure 1. The City of Fresno has required an acoustical analysis to determine if noise from Grantland Ave will exceed the City's standards, and to determine the extent of noise mitigation that will be required.

All sound levels reported in this analysis are A-weighted sound pressure levels in decibels (dB). A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards utilize A-weighted sound levels, as they correlate well with public reaction to noise.

Figure 1-1 – Site Location

2. CRITERIA FOR ACCEPTABLE NOISE EXPOSURE

The Noise Element of the City of Fresno 2014 General Plan establishes noise level criteria in terms of the Day-Night Average Level (DNL) metric. The DNL is the time-weighted energy average noise level for a 24-hour day, with a 5 dB penalty added to noise levels occurring during the nighttime hours (10:00 p.m.-7:00 a.m.). The DNL represents cumulative exposure to noise over an extended period of time and is therefore calculated based upon average sound levels over a 15 minute period.

The Noise Element establishes a land use compatibility criterion of 55 dB DNL for exterior noise levels in outdoor activity areas of new residential developments to be considered "Normally Acceptable" per the City of Fresno standards. The City of Fresno allows for as much as 60 dB DNL to be considered "Normally Acceptable." Outdoor activity areas generally include backyards of single-family residences and individual patios or decks of multi-family developments. The intent of the exterior noise level requirement is to provide an acceptable noise environment for outdoor activities and recreation.

The City of Fresno also defines a noise level of 55 dB to 70 dB as " Conditionally Acceptable" for residential single family homes. The City further clarifies this classification as "New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction but with closed windows and fresh air supply systems or air conditioning will normally suffice."

See **City of Fresno Land Use and Noise Compatibility Matrix** on page 10.

The Noise Element also requires that interior noise levels attributable to exterior noise sources not exceed 45 dB DNL. The intent of the interior noise level standard is to provide an acceptable noise environment for indoor communication and sleep.

3. PROJECT SITE NOISE EXPOSURE

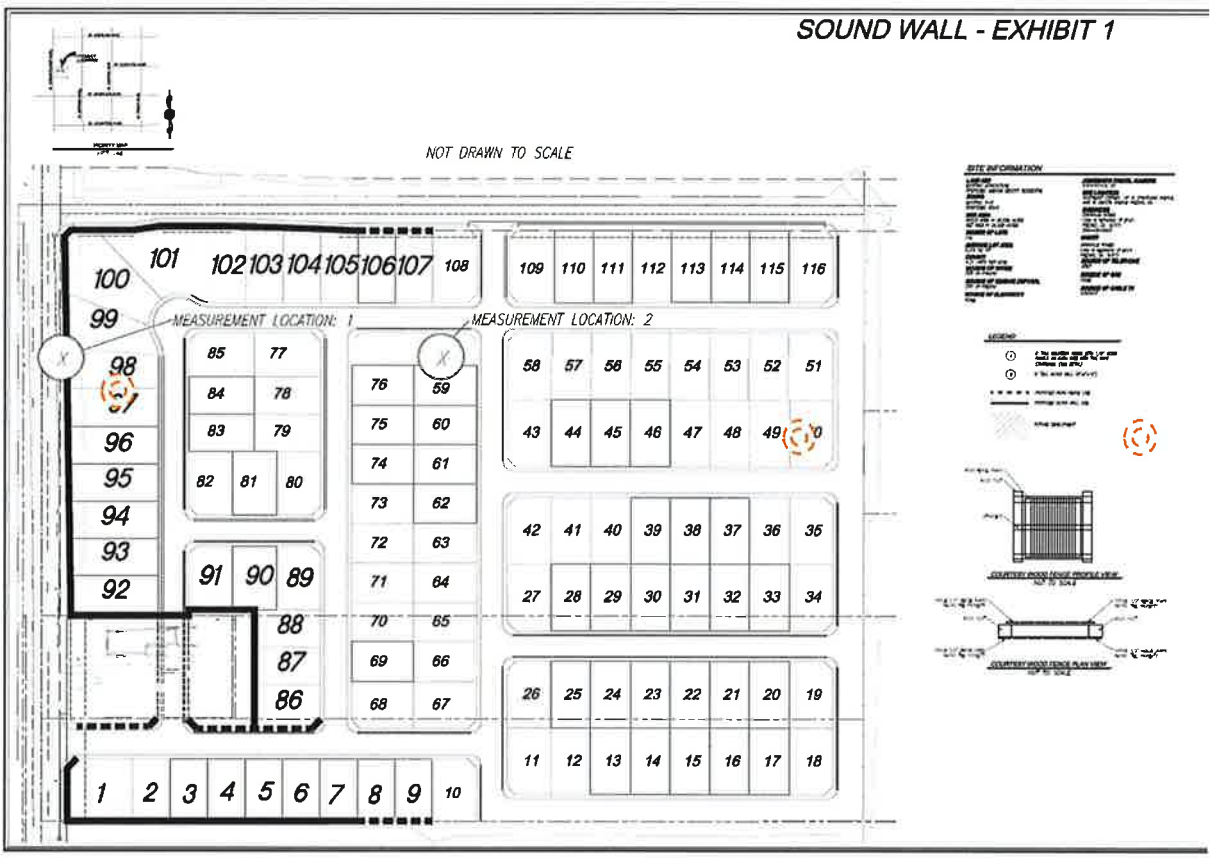
Grantland Avenue runs along the western boundary of the project site. The distance from the center of the road to the closest proposed residential buildings will be approximately 93.5 feet. This is based upon an estimated wall location 33.5 feet from the centerline of Grantland Ave and a 60 foot rear yard setback separating the house from the sound barrier.

In order to determine the road's noise exposure for the project site, a 24 hour noise level measurement were conducted at the western edge of the project site on June 12th and 24 hour noise level measurement were conducted at the middle of the project site on June 13th to determine the ambient sound levels. Noise monitoring equipment was setup as shown on

Figure 3-1. The noise monitoring site was located at approximately 32 feet from the center of the road so that the trees on the site would not interfere with the noise measurement. Noise monitoring equipment consisted of a Casella 633C sound level monitor equipped with a Casella 495 microphone. The instrumentation was calibrated prior to and after each use with a Casella 120/1 acoustic calibrator to ensure the accuracy of the measurements. The microphone was located on a tripod at five feet above the ground. The instrumentation complies with applicable standards of the American National Standards Institute (ANSI) for Type 1 (precision) sound level meters. The sound levels recorded during the two sound measurements coincided with less than 2 dB of difference for the various time periods.

Adjusting for the planned 60 foot house locations from Shaw Avenue, traffic on the western side of the site produced measured SEL values in the range of 29.8 – 65.7 dBA with an average measured SEL of 56.1 dBA. The measured ambient DNL values during the noise monitoring period ranged from 31.4 - 52.9 dB, *including noise from all sources*.

Figure 3-1 – Site Map



4. NOISE MITIGATION

3.1 Exterior Noise Exposure:

The City of Fresno Noise Element sets 60 dB DNL or less as the acceptability criterion within outdoor activity areas of noise-sensitive land uses. For the undeveloped site, the existing road noise exposure at the closest proposed noise-sensitive building is 65.7 dB DNL for a receiver 5 feet above the project grade. Since the development consists of single-family homes, outdoor activity areas are assumed to be located within individual backyards.

To mitigate traffic noise exposure the project developer has proposed that a sound wall be constructed along the northern, western, and southern boundary of the project site. The sound wall is intended to provide acoustical shielding of individual backyards and to reduce the amount of noise affecting the interior of proposed residences.

A sound wall insertion loss program based on the FHWA Model was used to calculate the insertion loss (noise reduction) provided by the proposed sound wall. The model calculates the insertion loss of a wall of given height based on the effective height of the noise source, height of the receiver, distance from the receiver to the wall, and distance from the noise source to the wall. The standard height of a residential receiver is five feet above the building pad elevation.

Based upon the above-described assumptions and method of analysis, the noise level insertion loss values for sound walls of various heights were calculated. The calculations indicated that the recommended sound wall with a minimum height of 8 feet relative to the closest building pad elevations would be required to reduce noise exposure by 6.5 dB at the rear of the closest proposed homes. The above-described sound wall would be effective at the first-floor receiver elevation only. Sound wall effectiveness will be significantly reduced at any proposed second-floor receivers adjacent to the road. The sound wall should be continuous without gaps or openings and should be constructed of a dense material such as masonry blocks within 420' of the center line of Grantland Ave.

The addition of landscaping trees of a height greater than 8 feet will not significantly increase the sound reduction by any noticeable degree since a single spaced line of trees is not sufficiently thick to block sound from a moving source.

It is recommended the following mitigation measures be implemented:

1. Install 8 feet block wall or combination of block wall and landscape berm to total 8 feet high along Grantland Avenue, the north and south sides of the property extending at

least 420' from the centerline of Grantland Ave. Refer to **Exhibit 1** for specifics on wall location and length.

2. Install a 6 foot wooden courtesy fence with ½ inch thick wood slats on both sides and staggered so that there is no direct view through the fence should continue from 420' to 570' to reduce the sound levels on the sides of the property to 55 dB. Gaps in the fence should be as small as possible. Refer to **Exhibit 1** for specifics on wall location and length.

3.2 Interior Noise Exposure:

The City of Fresno interior noise level standard is 45 dB DNL. In order to satisfy the City's interior noise level standard at the first-floor level, and assuming that a sound wall will be constructed to reduce exterior noise exposure to a maximum of 59.2 dB DNL, the proposed construction will need to be capable of providing an outdoor-to-indoor noise level reduction (NLR) of approximately 14.2 dB (59.2-45=14.2). Second-floor living spaces, if proposed, would need to be capable of providing an NLR of approximately 20.7 dB. The higher NLR performance required for second floor living spaces is the result of reduced acoustical shielding provided by the proposed sound wall.

A specific analysis of interior noise levels was not performed. However, it is generally accepted that common residential construction methods complying with current building code requirements will reduce exterior noise levels by a least 15-20 dB, if windows and doors are closed. This will be sufficient on the only first floor for compliance with the City's 45 dB DNL interior standard, provided the above-described sound wall and fence are implemented. If a second floor is build on the homes along Grantland Ave, standard construction methods will likely not be enough to reach the 45 dB requirement. The City of Fresno provides the following recommendations for improving sound insulation when standard construction methods is likely to be insufficient:

Where greater noise reduction is required, acoustical treatment of the building facade may be necessary. Reducing relative window area is the most effective control technique, followed by providing acoustical glazing (e.g., thicker glass or increased air space between panes) within frames with low air infiltration rates, using fixed (i.e., non-movable) acoustical glazing, or eliminating windows altogether. Noise transmitted through walls can be reduced by increasing wall mass (e.g., using stucco or brick in lieu of wood siding), or isolating wall members by using double or staggered stud walls, while noise transmitted through doorways can be lessened by reducing door area, using solid-core doors, or sealing door perimeters with suitable gaskets. Noise-reducing roof treatments include using plywood sheathing under roofing materials

5. CONCLUSIONS AND RECOMMENDATIONS

Tract 6237 will comply with the exterior and interior noise level requirements of the City of Fresno provided the following mitigation measures are incorporated into the final project design.

1. The sound wall described on pages 6 and 7 of this report should be constructed to reduce exterior noise exposure in outdoor activity areas and the level of noise affecting exterior building facades. The sound wall should be continuous without gaps or openings and should be constructed of a dense material such as masonry blocks within 420' of the center line of Grantland Ave. A 6 foot wooden courtesy fence with a ½ inch thick wood slats on both sides and staggered so that there is no direct view through the fence should continue from 420' to 570' to reduce the sound levels on the sides of the property to 55 dB. Gaps in the fence should be as small as possible. Refer to **Exhibit 1** for specifics on wall location and length.

(Exaggerated example of Wooden courtesy sound wall)

(Example of masonry block sound wall)

2. Mechanical ventilation or air conditioning must be provided for all homes so that windows and doors may remain closed for the required acoustical insulation.

3. If a second story is built for the homes along Grantland Ave (lots 92-102), additional design criteria must be included in the homes to account for needing a dB reduction of at least 20.7 dB. Examples and recommendations for the additional sound insulation can be found on page 8.

4. Lots 1-3 on West Fedora Ave will not be completely shielded from the noise generated on Grantland Ave due to the intersection of Grantland Ave and W Fedora Ave. These 3 lots will require the additional building requirements that described on page 8 for both the first and second floors.

One change that is being considered for this project that would greatly reduce the traffic noise for this site would be to install a 3 way stop sign at the intersection of Grantland Ave and Dakota Ave. With this intersection being at the NW corner of the site, it would greatly reduce the noise generated by the vehicles that currently pass the proposed site at 55 mph.

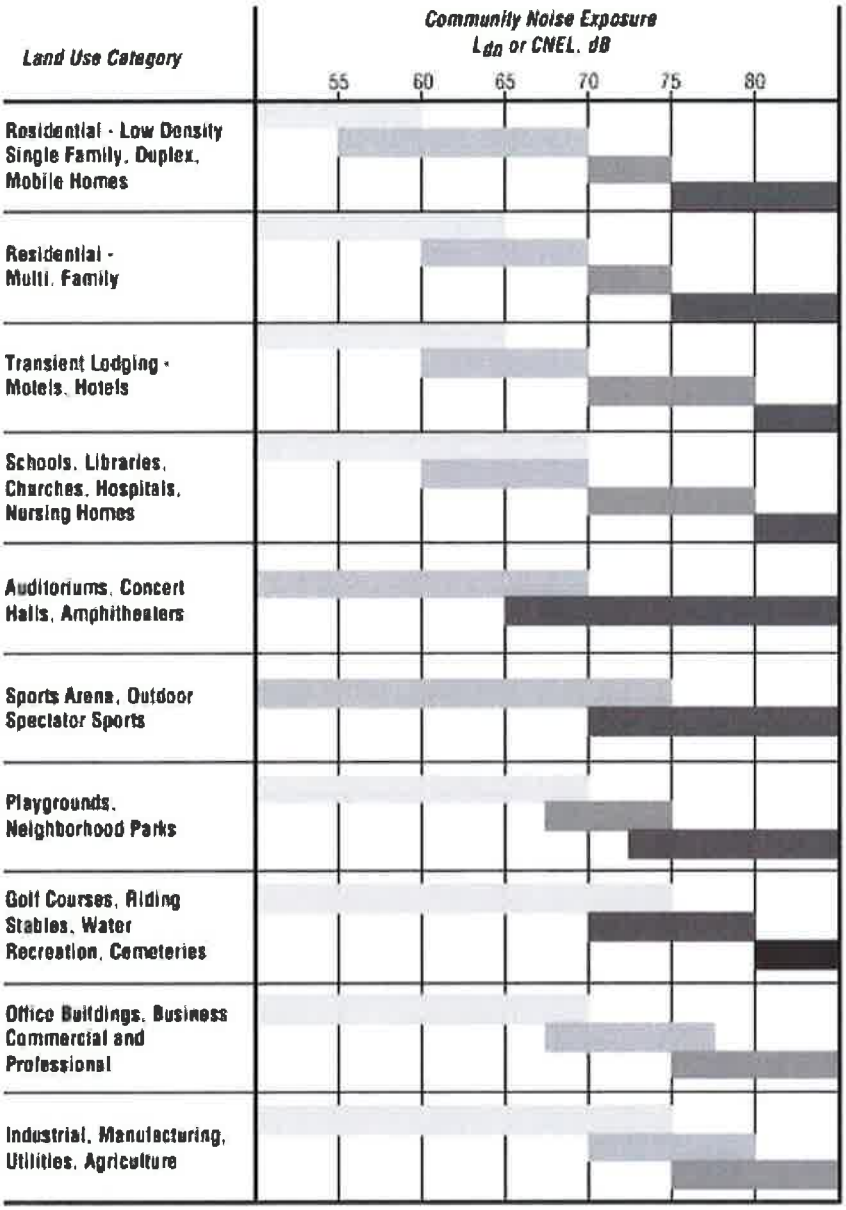
The conclusions and recommendations of this acoustical analysis are based upon the best information available at the time the analysis was prepared concerning the proposed site plan, project grading, building construction and road traffic. Any significant changes in these factors will require a reevaluation of the findings of this report.

Rhett Winterton — 7/29/19

Rhett Winterton
Technical Analyst

Date

City of Fresno Land Use and Noise Compatibility Matrix



INTERPRETATION:

Normally Acceptable
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally Unacceptable
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable
New construction or development should generally not be undertaken.

Table 5.11-7: Maximum Allowable Noise Exposure for Noise-Sensitive Land Uses

Land Use[1]	Outdoor Activity Areas[2] L_{dn} dB	Interior Spaces	
		L_{dn} dB	L_{dn} dB[3]
Residential	60[4]	45	—
Transient Lodging	60[4]	45	—
Hospitals, Nursing Homes	60[4]	45	—
Theaters, Auditoriums, Music Halls	—	—	35
Churches, Meeting Halls	60[4]	—	45
Office Buildings	—	—	45
Schools, Libraries, Museums	—	—	45

Notes:
1 The Planning and Development Director, on a case-by-case basis, may designate land uses other than those shown in this table to be noise-sensitive, and may require appropriate noise mitigation measures.
2 Where the location of the outdoor activity area is unknown or is not applicable, the exterior noise level standard shall be applied to the property line of the receiving land use.
3 As determined for a typical worst-case hour during periods of use.
4 Noise levels up to 65 dB Ldn adjacent to the Burlington Northern Santa Fe and Union Pacific mainline tracks may be allowed by the project approving authority when it is determined that it is not possible to achieve 60 dB Ldn in outdoor activity areas using a practical application of the best-available noise reduction technology, and when all feasible exterior noise reduction measures have been proposed.
Source: 2025 Fresno General Plan, Noise Element, February 2002, p. 163.

Table 5.11-2: Noise Reduction Afforded by Common Building Construction

Construction Type	Typical Occupancy	General Description	Range of Noise Reduction (dB)[1]
1	Residential, Commercial, Schools	Wood frame, stucco or wood sheathing exterior. Interior drywall or plaster. Sliding glass windows, with windows partially open.	15 to 20
2	Same as 1 above	Same as 1 above, but with windows closed.	25 to 30
3	Commercial, Schools	Same as 1 above, but with fixed 0.25-inch plate glass windows.	30 to 35
4	Commercial, Industrial	Steel or concrete frame, curtain wall, or masonry exterior wall. Fixed 0.25-inch plate glass windows.	30 to 40

Notes:
[1] Range depends on the amount windows are open, degree of window seal, and glass area of windows.
Source: Caltrans 2002: 7-37.

City of Fresno Interior and Exterior Noise Standards Energy Average (CNEL)

8.40.040 - Exterior noise standards.

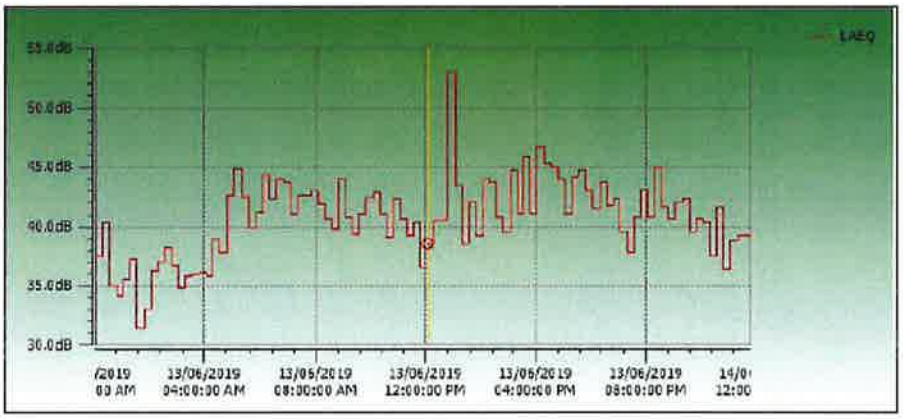
Category	Cumulative Number of minutes in any one-hour time period	Noise Level Standards, dBA	
		Daytime 7 a.m. to 10 p.m.	Nighttime 10 p.m. to 7 a.m.
1	30	50	45
2	15	55	50
3	5	60	55
4	1	65	60
5	0	70	65

Sound Level Meter - Ambient Sound Level Output

Casella CEL Ltd.

Report On CEL-63X

Instrument Model	**CEL-633C**		
Duration	24:00:00 HH:MM:SS	Result	Cumulative
Start Date & Time	6/13/2019 3:04:06 PM	Calibration (After) Date	6/14/2019 3:50:10 PM
End Date & Time	6/14/2019 3:04:06 PM	Calibration (Before) Date	6/13/2019 3:01:39 PM
Serial Number	2511397	LAeq	42 dB



Report Generated By Insight CEL-63x - Casella CEL Ltd - On 6/17/2019 At 11:03:38 AM

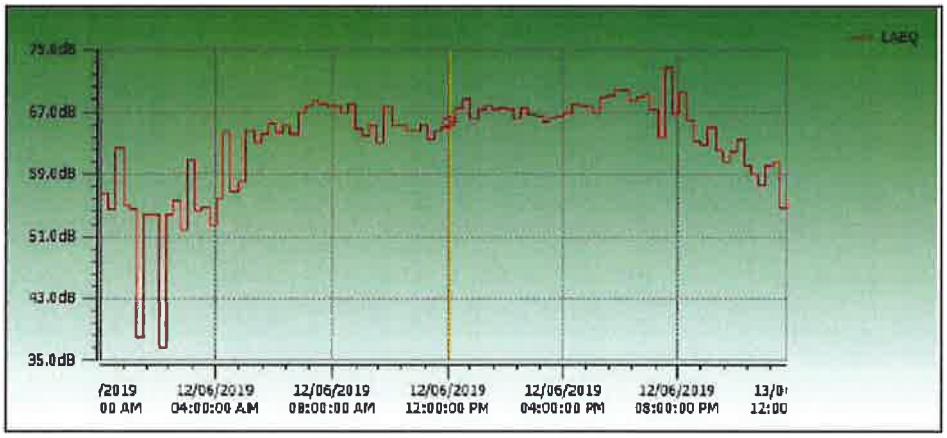
Page 1 of 1

Sound Level Meter - Traffic Sound Measurement

Casella CEL Ltd.

Report On CEL-63X

Instrument Model	**CEL-633C**		
Duration	24:00:00 HH:MM:SS	Result	Cumulative
Start Date & Time	6/12/2019 2:17:38 PM	Calibration (After) Date	6/13/2019 2:45:05 PM
End Date & Time	6/13/2019 2:17:38 PM	Calibration (Before) Date	6/12/2019 2:12:41 PM
Serial Number	2511397	LAeq	65.6 dB



Sound Level Meter - Traffic Sound Measurement Calculations

Time of Day	Date and stopwatch time	Laeq
2:15	6/12/2019 0:02	56.6
2:30	6/12/2019 0:17	54.5
2:45	6/12/2019 0:32	62.3
3:00	6/12/2019 0:47	55
3:15	6/12/2019 1:02	54.4
3:30	6/12/2019 1:17	37.9
3:45	6/12/2019 1:32	53.7
4:00	6/12/2019 1:47	53.8
4:15	6/12/2019 2:02	36.8
4:30	6/12/2019 2:17	53.8
4:45	6/12/2019 2:32	55.5
5:00	6/12/2019 2:47	51.9
5:15	6/12/2019 3:02	60.8
5:30	6/12/2019 3:17	54.3
5:45	6/12/2019 3:32	54.7
6:00	6/12/2019 3:47	52.4
6:15	6/12/2019 4:02	55.8
6:30	6/12/2019 4:17	64.4
6:45	6/12/2019 4:32	56.7
7:00	6/12/2019 4:47	58
7:15	6/12/2019 5:02	64.7
7:30	6/12/2019 5:17	63
7:45	6/12/2019 5:32	64.2
8:00	6/12/2019 5:47	65.6
8:15	6/12/2019 6:02	64.3
8:30	6/12/2019 6:17	65.2
8:45	6/12/2019 6:32	64.2
9:00	6/12/2019 6:47	66.9
9:15	6/12/2019 7:02	67.8
9:30	6/12/2019 7:17	68.4
9:45	6/12/2019 7:32	67.9
10:00	6/12/2019 7:47	67.7
10:15	6/12/2019 8:02	67.8
10:30	6/12/2019 8:17	66.9
10:45	6/12/2019 8:32	67.9
11:00	6/12/2019 8:47	64.8
11:15	6/12/2019 9:02	63.9
11:30	6/12/2019 9:17	65.3
11:45	6/12/2019 9:32	63.1
12:00	6/12/2019 9:47	67.6
12:15	6/12/2019 10:02	65.4
12:30	6/12/2019 10:17	65.4
12:45	6/12/2019 10:32	64.7
1:00	6/12/2019 10:47	64.4
1:15	6/12/2019 11:02	65.4
1:30	6/12/2019 11:17	63.4

1:45	6/12/2019 11:32	64.5
2:00	6/12/2019 11:47	65
2:15	6/12/2019 12:02	65.7
2:30	6/12/2019 12:17	67.4
2:45	6/12/2019 12:32	68.7
3:00	6/12/2019 12:47	66.1
3:15	6/12/2019 13:02	67.2
3:30	6/12/2019 13:17	67.7
3:45	6/12/2019 13:32	67.2
4:00	6/12/2019 13:47	67.4
4:15	6/12/2019 14:02	67.2
4:30	6/12/2019 14:17	66.1
4:45	6/12/2019 14:32	67.4
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5:15	6/12/2019 15:02	66.4
5:30	6/12/2019 15:17	65.7
5:45	6/12/2019 15:32	66.3
6:00	6/12/2019 15:47	66.4
6:15	6/12/2019 16:02	66.7
6:30	6/12/2019 16:17	68
6:45	6/12/2019 16:32	67.8
7:00	6/12/2019 16:47	67.7
7:15	6/12/2019 17:02	66.9
7:30	6/12/2019 17:17	68.9
7:45	6/12/2019 17:32	69
8:00	6/12/2019 17:47	69.8
8:15	6/12/2019 18:02	69.7
8:30	6/12/2019 18:17	68.3
8:45	6/12/2019 18:32	68.8
9:00	6/12/2019 18:47	69.2
9:15	6/12/2019 19:02	67.2
9:30	6/12/2019 19:17	63.7
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10:00	6/12/2019 19:47	66.7
10:15	6/12/2019 20:02	69.6
10:30	6/12/2019 20:17	65.8
10:45	6/12/2019 20:32	63.3
11:00	6/12/2019 20:47	62.7
11:15	6/12/2019 21:02	65
11:30	6/12/2019 21:17	62.1
11:45	6/12/2019 21:32	60.7
12:00	6/12/2019 21:47	61.9
12:15	6/12/2019 22:02	63.4
12:30	6/12/2019 22:17	60.1
12:45	6/12/2019 22:32	59.1
1:00	6/12/2019 22:47	57.6
1:15	6/12/2019 23:02	60
1:30	6/12/2019 23:17	60.7
1:45	6/12/2019 23:32	54.7

2:00	6/12/2019 23:47	56.1

	Recorded Sound, 32' from East edge of property and 62' from centerline of Grantland ave		Adjusted sound for 93.5' from center of Grantland Ave	Sound reduction from 8' wall	Block wall length	Wall length from center of Grantland ave
Time of Day	Date and stopwatch	LAeq	LAeq	LAeq	LAeq	LAeq
2:15	6/12/2019 0:02	58.6	49.6	43.1	39.8	37.8
2:30	6/12/2019 0:17	54.5	47.5	41.0	37.7	35.7
2:45	6/12/2019 0:32	62.3	55.3	48.8	45.5	43.5
3:00	6/12/2019 0:47	55	48.0	41.5	38.2	36.2
3:15	6/12/2019 1:02	54.4	47.4	40.9	37.6	35.6
3:30	6/12/2019 1:17	37.9	30.9	24.4	21.1	19.1
3:45	6/12/2019 1:32	53.7	46.7	40.2	36.9	34.9
4:00	6/12/2019 1:47	53.8	46.8	40.3	37.0	35.0
4:15	6/12/2019 2:02	36.8	29.8	23.3	20.0	18.0
4:30	6/12/2019 2:17	53.8	46.8	40.3	37.0	35.0
4:45	6/12/2019 2:32	55.5	48.5	42.0	38.7	36.7
5:00	6/12/2019 2:47	51.9	44.9	38.4	35.1	33.1
5:15	6/12/2019 3:02	60.8	53.8	47.3	44.0	42.0
5:30	6/12/2019 3:17	54.3	47.3	40.8	37.5	35.5
5:45	6/12/2019 3:32	54.7	47.7	41.2	37.9	35.9
6:00	6/12/2019 3:47	52.4	45.4	38.9	35.6	33.6
6:15	6/12/2019 4:02	55.8	48.8	42.3	39.0	37.0
6:30	6/12/2019 4:17	64.4	57.4	50.9	47.6	45.6
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7:00	6/12/2019 4:47	58	51.0	44.5	41.2	39.2
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11:45	6/12/2019 9:32	63.1	56.1	49.6	46.3	44.3
12:00	6/12/2019 9:47	67.6	60.6	54.1	50.8	48.8
12:15	6/12/2019 10:02	65.4	58.4	51.9	48.6	46.6
12:30	6/12/2019 10:17	65.4	58.4	51.9	48.6	46.6
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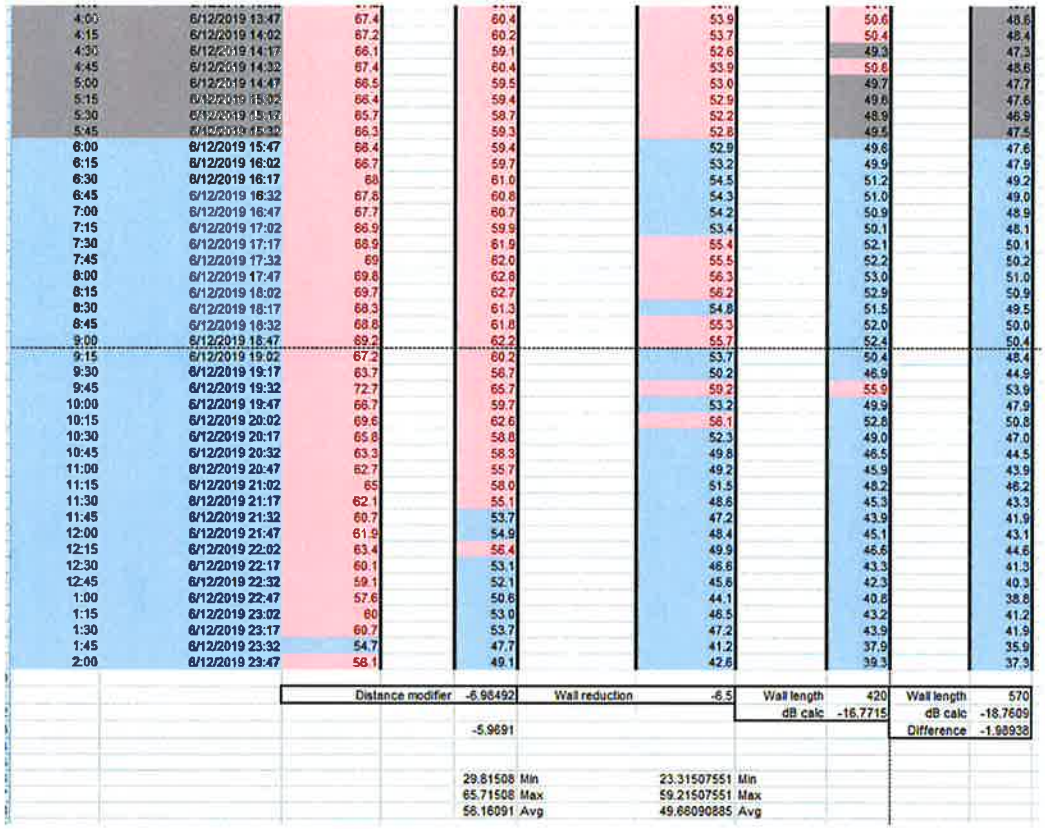

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4:30	6/12/2019 14:17	66.1	59.1		52.6		49.3		47.3		
4:45	6/12/2019 14:32	67.4	60.4		53.9		50.6		48.6		
5:00	6/12/2019 14:47	68.5	59.5		53.0		49.7		47.7		
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6:15	6/12/2019 16:02	66.7	59.7		53.2		49.9		47.9		
6:30	6/12/2019 16:17	68	61.0		54.5		51.2		49.2		
6:45	6/12/2019 16:32	67.8	60.8		54.3		51.0		49.0		
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7:30	6/12/2019 17:17	68.9	61.9		55.4		52.1		50.1		
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2:00	6/12/2019 23:47	58.1	49.1		42.6		39.3		37.3		
		Distance modifier	-6.98492	Wall reduction	-6.5	Wall length	420	Wall length	570		
						dB calc	-16.7715	dB calc	-18.7609		
			-5.9691					Difference	-1.98938		
			29.81508 Min		23.31507551 Min						
			65.71508 Max		59.21507551 Max						
			56.16091 Avg		49.66090885 Avg						

Casella Sound Meter Calibration Certificate

FA00044

CASELLA

Certificate of Conformity and Calibration

Instrument Model:-	CEL-633C	**Preamplifier Type:-**	CEL-496
Serial Number	2511397	Serial Number	3768
Firmware revision	V129-09		
Microphone Type:-	CEL-251	As Received:-	113.9
Serial Number	1713	As Adjusted:-	114.0
Instrument Class/Type:-	1		

Applicable standards:-

IEC 61672: 2002 / EN 60651 (Electroacoustics - Sound Level Meters)
IEC 60651 1979 (Sound Level Meters), ANSI S1.4: 1983 (Specifications For Sound Level Meters)

Note:- The test sequences performed in this report are in accordance with the current Sound level meter Standard - IEC61672. The combination of tests performed are considered to confirm the products electro-acoustic performance to all applicable standards including superceeded Sound Level Meter Standards - IEC60651 and IEC60804.

Test Conditions:-	24.6 °C	Test Engineer:-	Ken Umbeer
	73.1 %RH	Date of Issue:-	January 9, 2019
	1007.1 mBar	Date Due:-	January 9, 2020

Declaration of conformity:-

This test certificate confirms that the instrument specified above has been successfully tested to comply with the manufacturer's published specifications. Tests are performed using equipment traceable to NIST. This product is certified as being compliant to the requirements of the CE Directive.

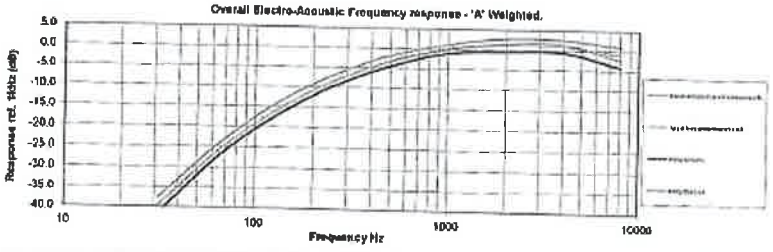
Test Summary:-

Self Generated Noise Test	All Tests Pass
Electrical Signal Test Of Frequency Weightings	All Tests Pass
Frequency & Time Weightings At 1 kHz	All Tests Pass
Level Linearity On The Reference Level Range	All Tests Pass
Toneburst Response Test	All Tests Pass
C-peak Sound Levels	All Tests Pass
Overload Indication	All Tests Pass
Acoustic Tests	All Tests Pass

Combined Electro-Acoustic Frequency Response - *A Weighted*

Combined Electro-Acoustic Frequency Response - A Weighted (IEC 61672-3:2006)

The following A-Weighted frequency response graph shows this instruments overall frequency response based upon the application of multi-frequency pressure field calibrations. The microphones Pressure to Free field correction coefficients are applied to pressure response. Reference level taken at 1kHz



Casella CEL
Regent House, Wolseley Road,
Kempston, Bedford
MK42 7JY
United Kingdom

Casella CEL, Inc., a subsidiary of IDEAL Industries, Inc.
Unit 4
Bethel
NY 10801
USA

Tested to CEL-63X test sheet 3P444 revision 03-12

Page 1 of 1

Casella Acoustic Calibrator Certificate

FA00044

Certificate of Conformity and Calibration

CASELLA CEL

Instrument Model: CEL-110/1 Acoustic Calibrator **Certificate #:** 68782
Serial Number: 301160

Calibration References:

Casella CEL hereby certifies that the above listed sound measuring instrument has been tested according to the manufacturer's specifications and meets the requirements of the relevant American National Standards Institute (ANSI) Standard for Sound Calibrators S1.40 - 1983 (R1997). This instrument was calibrated against standards which are either traceable to the National Institute of Standards and Technology (NIST) or they have been derived by approved ratio techniques.

Test Conditions:

24.6 °C
73.1 %RH
1007.1 mBar

Date of Issue:- January 9, 2019
Due Date:- January 9, 2020
Service Engineer:- Ken Umbeer

Declaration of conformity:-

This test certificate confirms that the instrument specified above has been successfully tested to comply with the manufacturer's published specifications. Tests are performed using equipment traceable to national standards. This product is certified as being compliant to the requirements of the CE Directive. Test accuracy ratio (TAR) ≥1.

Summary:

The data represents the response of the sound level meter calibrator to the reference source corrected for atmospheric conditions at the time of calibration.

	Nominal Value	Tolerance	As Received	As Adjusted
Frequency (Hz)	1000.0	±5.0	1000.0	1000.0
Level (dB)	114.0	±0.5	113.9	114.0
Level (dB)	94.0	±0.5	93.9	94.0

Standards Used in Calibration:		**Serial Number**	**Calibration Due Date**	**Certificate Number**
Sound Level Meter:	CEL-620.A1	5130002	1/30/2019	28473-2
Multimeter:	Fluke 45	4995184	1/31/2019	1626798

Casella CEL
415 Lawrence Bell Dr.
Unit 84
Buffalo, NY 14221
U.S.A.

Toll Free: +1 (866) 366 2966
Fax: +1 (716) 276 3043
E-mail: info@casellaUSA.com
Web: www.casellaUSA.com

Casella CEL (U.K.)
Regent House
Wolseley Road
Kempston, Bedford
MK42 7JY

Phone: +44 (0) 1234 844100
Fax: +44(0) 1234 841490
E-mail: info@casellacel.com
Web: www.casellacel.com

SOUND WALL - EXHIBIT 1

VICINITY MAP
NOT TO SCALE

LEGEND:

(A) 6' TALL COURTESY FENCE WITH 1/2" WOOD PANELS ON EACH SIDE WITH THE GAPS STAGGERED. (SEE DETAIL)

(B) 8' TALL BLOCK WALL (8"x8"x16")

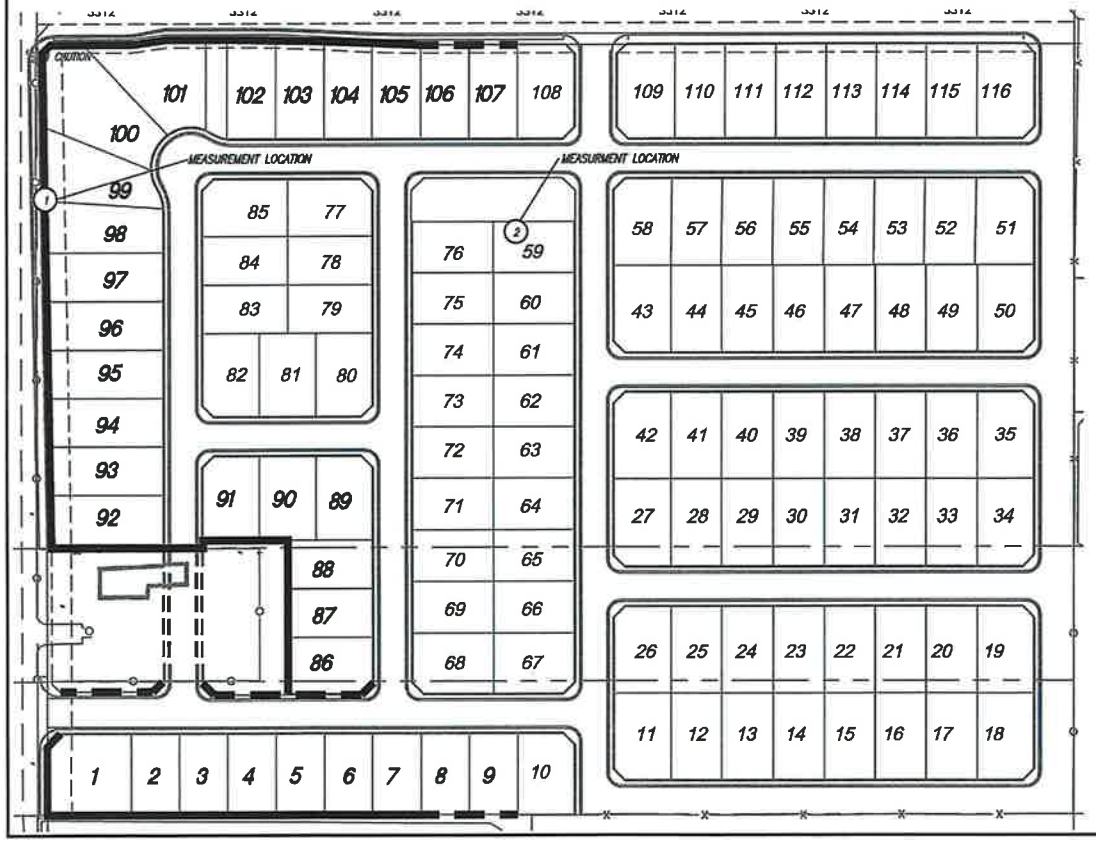
PROPOSED WOOD FENCE LINE

PROPOSED BLOCK WALL LINE

FUTURE DEVELOPMENT

SCALE 1" = 150'

0 150' 300'



SITE INFORMATION

LAND USE
EXISTING: AGRICULTURE
PROPOSED: MEDIUM DENSITY RESIDENTIAL

ZONING
EXISTING: R-R
PROPOSED: RS-5

SITE AREA
GROSS AREA = 28.26± ACRES
NET AREA = 26.92± ACRES

NUMBER OF LOTS
116

AVERAGE LOT AREA
7,316 SQ. FT.

DENSITY
4.31 UNITS PER ACRE

SOURCE OF WATER
CITY OF FRESNO

SOURCE OF SEWAGE DISPOSAL
CITY OF FRESNO

SOURCE OF ELECTRICITY
PG&E

ASSESSOR'S PARCEL NUMBERS
512-141-33, 47

SITE LOCATION
SOUTHEAST CORNER OF N. GRANTLAND AVENUE AND W. DAKOTA AVENUE FRESNO, CA

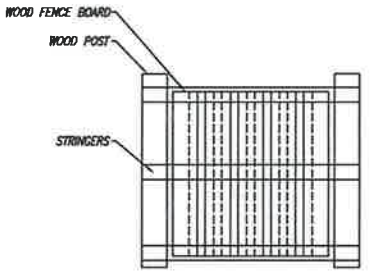
SUBDIVIDER
GRANVILLE HOMES
1396 W HERNDON ST #101
FRESNO, CA 93711
559-436-0900

OWNER
GRANVILLE HOMES
1396 W HERNDON ST #101
FRESNO, CA 93711

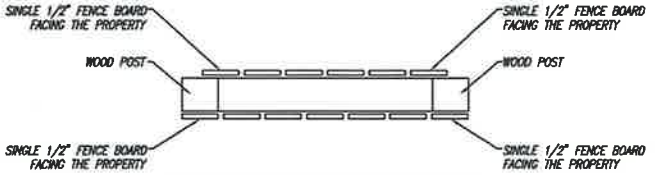
SOURCE OF TELEPHONE
AT&T

SOURCE OF GAS
PG&E

SOURCE OF CABLE TV
COMCAST



COURTESY WOOD FENCE PROFILE VIEW
NOT DRAWN TO SCALE



COURTESY WOOD FENCE PLAN VIEW

NOTE:

*BOLD LOTS HAVE MITIGATION REQUIREMENTS AS DETAILED IN THE REPORT

PLANNING • SURVEYING • CIVIL ENGINEERING
1234 O STREET FRESNO, CA. 93721
PH: (559) 449-4500 FAX (559) 449-4515

PRECISION CIVIL ENGINEERING, INC.

PROJECT NAME: SOUND EXHIBIT

JOB#: 18-038

DATE: 7-8-19

SHEET 1 OF 1

PRECISION CIVIL ENGINEERING, INC

1234 "O" Street
Fresno, CA 93721
Office: (559) 449-4500
Fax: (559) 449-4515

Will - Sound Study for T-6237. Thanks! Jarred

LETTER OF TRANSMITTAL

DATE: 7/29/2019 **JOB NO:** 18-038

PROJECT NAME: Dakota and Grantland

Attention: Jarred Olsen
Company: City of Fresno
Address: 2600 Fresno Street
Fresno, CA 93721

Delivered by:

☐ Courier ☐ USPS ☐ FedEx
☐ UPS ☐ Overnight ☐ Other
☐ PCE Employee

We are sending you:

☐ Shop Drawings ☐ Prints ☐ Plans ☐ Specifications
☐ Documents ☐ Change ☐ Samples ☐ Other: _____

Copies	Check #	Description
1		Sound Study

RECEIVED
JUL 29 2019
DARM - DEVELOPMENT SERVICES
CITY OF FRESNO

These are transmitted as checked below:

☐ For Approval ☐ Approved as submitted ☐ Resubmit for approval
☐ For your use ☐ Approved as noted ☐ Submitted for distribution
☐ As requested ☐ Returned for corrections ☐ Return corrected prints
☐ For Bid ☐ Other: _____

Note:

Sent from: M. Blas **Received by:** _____

If enclosures are not as noted please notify us at (559) 449-4500.
Thank you,
PCE Staff

For inner office use only:

☐ Project Info ☐ Surveying ☐ Permit Fees ☐ NPDES/FMFCD
☐ Job notes ☐ Client Corr. ☐ Utilities ☐ Geotech
☐ Eng. Cost estimate ☐ Arch. Corr. ☐ Developer ☐ Landscaping
☐ Title Report ☐ City/ County Corr. ☐ Contractor ☐ Miscellaneous

Mark all that apply:
☐ Copy filed in Transmittal Binder
☐ Copy filed in Billing folder
☐ Copy filed in Job binder

Filed by: _____

Appendix C
Traffic Impact Analysis

Draft Traffic Impact Analysis

Single-Family Housing

On the Southeast Corner of the Dakota Avenue Alignment and Grantland Avenue

In the City of Fresno, California

Prepared for:

Granville Homes, Affiliate
1396 West Herndon Avenue, Suite 101
Fresno, CA 93711

April 11, 2018

Project No. 004-055

JLB Traffic Engineering, Inc.

Traffic Engineering, Transportation Planning, & Parking Solutions

1300 E. Shaw Ave., Ste. 103
Fresno, CA 93710
Phone: (559) 570-8991
www.JLBtraffic.com

JLB Traffic Engineering, Inc.

Traffic Engineering, Transportation Planning, & Parking Solutions

Draft Traffic Impact Analysis

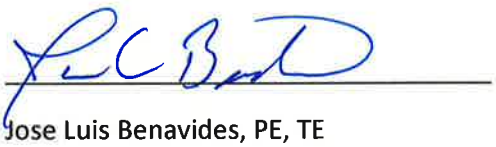
For the Single-Family Housing located on the Southeast Corner of the Dakota Avenue Alignment and Grantland Avenue

In the City of Fresno, CA

April 11, 2018

This Draft Technical Letter has been prepared under the direction of a licensed Traffic Engineer. The licensed Traffic Engineer attests to the technical information contained therein and has judged the qualifications of any technical specialists providing engineering data from which recommendations, conclusions, and decisions are based.

Prepared by:



Jose Luis Benavides, PE, TE

President

JLB Traffic Engineering, Inc.

Traffic Engineering, Transportation Planning, & Parking Solutions
1300 E. Shaw Ave., Ste. 103
Fresno, CA 93710
Phone: (559) 570-8991
www.JLBtraffic.com

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Introduction and Summary

Introduction

This report describes a Traffic Impact Analysis (TIA) prepared by JLB Traffic Engineering, Inc. (JLB) for the proposed Single-Family Housing (Project) located on the southeast corner of the Dakota Avenue Alignment and Grantland Avenue in the City of Fresno. The Project proposes to develop up to 180 single-family residential units on approximately 30.00 acres. Based on information provided to JLB, the Project will undergo a General Plan Amendment to modify the land use intended for High-Density Residential (10.00 acres) to allow Medium-Density Residential altogether (30.00 acres). Figure 1 shows the location of the proposed Project site relative to the surrounding roadway network.

The purpose of this TIA is to evaluate the potential on- and off-site traffic impacts, identify short-term roadway and circulation needs, determine potential mitigation measures, and identify any critical traffic issues that should be addressed in the on-going planning process. The scope of work was prepared via consultation with City of Fresno, County of Fresno and Caltrans staff.

Summary

The potential traffic impacts of the proposed Project were evaluated in accordance with the standards set forth by the level of service (LOS) policy of the City of Fresno, County of Fresno and Caltrans.

Existing Traffic Conditions

- At present, the intersection of Bryan Avenue and Ashlan Avenue exceeds its LOS threshold during the AM peak period. To improve the LOS at this intersection, it is recommended that the following recommendations be implemented.
  - Bryan Avenue and Ashlan Avenue
    - Modify the westbound through-right lane to a through lane; and
    - Add a westbound right-turn lane.
- At present, all study segments operate at an acceptable LOS.

Existing plus Project Traffic Conditions

- A review of the Project driveways to be constructed indicates that they are located at points the minimize traffic operational impacts to the existing roadway network.
- It is recommended that access to the Project Driveway maintain a minimum throat depth of 50 feet before any vehicular openings to the north.
- It is recommended that the Project implement Class II bike lanes along its frontages to Grantland Avenue and Dakota Avenue, and a Class I Bike Path on its frontage to Grantland Avenue.
- To promote alternative modes of transportation to Harvest Elementary School, it is recommended that the Central Unified School District work with the City of Fresno and County of Fresno to implement a Safe Routes to School plan and to seek grant funding to help build bikeways and walkways where they are lacking within the one-mile radius of the existing school site.

- To promote alternative modes of transportation to Glacier Point Middle School and Central High School (East Campus), it is recommended that the Central Unified School District work with the City of Fresno and County of Fresno to implement a Safe Routes to School plan and to seek grant funding to help build bikeways and walkways where they are lacking within the two-mile radius of the existing school site.
- At buildout, the proposed Project is estimated to generate a maximum of 1,699 daily trips, 133 AM peak hour trips and 178 PM peak hour trips.
- Under this scenario, the intersection of Bryan Avenue and Ashlan Avenue is projected to exceed its LOS threshold during the AM peak period. To improve the LOS at this intersection, it is recommended that the following recommendations be implemented.
  - Bryan Avenue and Ashlan Avenue
    - Modify the westbound through-right lane to a through lane;
    - Add a westbound right-turn lane; and
    - Modify the intersection to accommodate the added lane.
- Under this scenario, all study segments are projected to operate at an acceptable LOS.

Near Term plus Project Traffic Conditions

- The total trip generation for the near term projects is 53,404 daily trips, 4,071 AM peak hour trips and 5,164 PM peak hour trips.
- Under this scenario, the intersection of Bryan Avenue and Ashlan Avenue is projected to exceed its LOS threshold during the AM peak period. To improve the LOS at this intersection, it is recommended that this intersection be signalized with protective left-turn phasing in all directions.
- Under this scenario, all study segments are projected to operate at an acceptable LOS.

Cumulative Year 2035 No Project Traffic Conditions

- Under this scenario, the intersections of Grantland Avenue and Ashlan Avenue, Bryan Avenue and Ashlan Avenue, Grantland Avenue and Dakota Avenue, Bryan Avenue and Dakota Avenue, Grantland Avenue and Shields Avenue, and Grantland Avenue and Clinton Avenue are projected to exceed their LOS threshold during one or both peak periods. To improve the LOS at the intersections projected to exceed their LOS threshold, it is recommended that the following improvements be implemented.
  - Grantland Avenue and Ashlan Avenue
    - Modify the northbound through-right lane to a right-turn lane;
    - Add a second southbound left-turn lane with a receiving lane east of Grantland Avenue;
    - Add a second southbound through lane with a receiving lane south of Ashlan Avenue;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the added lanes.
  - Bryan Avenue and Ashlan Avenue
    - Modify the eastbound through-right lane to a through lane;
    - Add an eastbound right-turn lane;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the added lane.

- Grantland Avenue and Dakota Avenue
  - Modify the northbound right-turn lane to a through-right lane with a receiving lane north of Dakota Avenue;
  - Add a second southbound through lane with a receiving lane south of Dakota Avenue; and
  - Modify the intersection to accommodate the added lanes.
- Bryan Avenue and Dakota Avenue
  - Add an eastbound left-turn lane;
  - Modify the eastbound left-through-right lane to a through-right lane;
  - Add a westbound left-turn lane;
  - Modify the westbound left-through-right lane to a through-right lane;
  - Add a northbound left-turn lane;
  - Modify the northbound left-through-right lane to a through-right lane;
  - Add a southbound left-turn lane;
  - Modify the southbound left-through-right lane to a through-right lane;
  - Signalize the intersection with protective left-turn phasing in all directions; and
  - Modify the intersection to accommodate the added lanes.
- Grantland Avenue and Shields Avenue
  - Add an eastbound left-turn lane;
  - Modify the eastbound left-through-right lane to a through-right lane;
  - Add a westbound left-turn lane;
  - Modify the westbound left-through-right lane to a through lane;
  - Add a westbound right-turn lane;
  - Add a northbound left-turn lane;
  - Modify the northbound left-through-right lane to a through lane;
  - Add a northbound through-right lane with a receiving lane north of Shields Avenue;
  - Add a southbound left-turn lane;
  - Modify the southbound left-through-right lane to a through lane;
  - Add a second southbound through lane with a receiving lane south of Shields Avenue;
  - Add a southbound right-turn lane;
  - Signalize the intersection with protective left-turn phasing in all directions; and
  - Modify the intersection to accommodate the added lanes.
- Grantland Avenue and Clinton Avenue
  - Add a westbound left-turn lane; and
  - Modify the intersection to accommodate the added lane.

- Under this scenario, the segments of Grantland Avenue between Ashlan Avenue and Clinton Avenue are projected to operate at an unacceptable LOS. To improve the LOS of these segments, it is recommended that Grantland Avenue be modified to accommodate two lanes in each direction.

Cumulative Year 2035 plus Project Traffic Conditions

- Under this scenario, the intersections of Grantland Avenue and Ashlan Avenue, Bryan Avenue and Ashlan Avenue, Grantland Avenue and Dakota Avenue, Bryan Avenue and Dakota Avenue, Grantland Avenue and Shields Avenue, and Grantland Avenue and Clinton Avenue are projected to exceed their LOS threshold during one or both peak periods. To improve the LOS at the intersections projected to exceed their LOS threshold, it is recommended that the following improvements be implemented.
  - Grantland Avenue and Ashlan Avenue
    - Modify the northbound through-right lane to a right-turn lane;
    - Add a second southbound left-turn lane with a receiving lane east of Grantland Avenue;
    - Modify the southbound through-right lane to a through lane;
    - Add a second southbound through lane with a receiving lane south of Ashlan Avenue;
    - Add a southbound right-turn lane;
    - Implement overlap phasing of the southbound right-turn with the eastbound left-turn phase;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the added lanes.
  - Bryan Avenue and Ashlan Avenue
    - Modify the eastbound through-right lane to a through lane;
    - Add an eastbound right-turn lane;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the added lane.
  - Grantland Avenue and Dakota Avenue
    - Modify the northbound right-turn lane to a through-right lane with a receiving lane north of Dakota Avenue;
    - Add a second southbound through lane with a receiving lane south of Dakota Avenue; and
    - Modify the intersection to accommodate the added lanes.
  - Bryan Avenue and Dakota Avenue
    - Add an eastbound left-turn lane;
    - Modify the eastbound left-through-right lane to a through-right lane;
    - Add a westbound left-turn lane;
    - Modify the westbound left-through-right lane to a through-right lane;
    - Add a northbound left-turn lane;
    - Modify the northbound left-through-right lane to a through-right lane;
    - Add a southbound left-turn lane;
    - Modify the southbound left-through-right lane to a through-right lane;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the added lanes.

- Grantland Avenue and Shields Avenue
  - Add an eastbound left-turn lane;
  - Modify the eastbound left-through-right lane to a through-right lane;
  - Add a westbound left-turn lane;
  - Modify the westbound left-through-right lane to a through lane;
  - Add a westbound right-turn lane;
  - Add a northbound left-turn lane;
  - Modify the northbound left-through-right lane to a through lane;
  - Add a northbound through-right lane with a receiving lane north of Shields Avenue;
  - Add a southbound left-turn lane;
  - Modify the southbound left-through-right lane to a through lane;
  - Add a second southbound through lane with a receiving lane south of Shields Avenue;
  - Add a southbound right-turn lane;
  - Signalize the intersection with protective left-turn phasing in all directions; and
  - Modify the intersection to accommodate the added lanes.
- Grantland Avenue and Clinton Avenue
  - Add a westbound left-turn lane; and
  - Modify the intersection to accommodate the added lane.

- Under this scenario, the segments of Grantland Avenue between Ashlan Avenue and Clinton Avenue are projected to operate at an unacceptable LOS. To improve the LOS of these segments, it is recommended that Grantland Avenue be modified to accommodate two lanes in each direction.

Queuing Analysis

- It is recommended that the City consider left- and right-turn lane storage lengths as indicated in the Queuing Analysis.

Project's Equitable Fair Share

- It is recommended that the Project contribute its equitable Fair Share as presented in Table XVI.

TIA Scope of Work

The study focused on evaluating traffic conditions at the existing study intersections that may potentially be impacted by the proposed Project. On January 29, 2018, a Draft Scope of Work for the preparation of a Traffic Impact Analysis for this Project was provided to the City of Fresno, County of Fresno and Caltrans for their review and comment. The Draft Scope of Work was based on communication with City of Fresno staff. Any comments to the proposed Scope of Work were to be provided by February 19, 2018.

On Tuesday, February 13, 2018, the City of Fresno responded to the Draft Scope of Work. The City of Fresno requested that Warrants 1 and 2 be prepared for the unsignalized study intersections under the Existing Traffic Conditions scenario only. In addition, the City requested that the intersections of Ashlan Avenue and Bryan Avenue and Dakota Avenue and Bryan Avenue be included in the analysis. On Thursday, February 15, 2018, Caltrans approved the Draft Scope of Work as presented. On Friday, February 16, 2018, the County of Fresno responded to the Draft Scope of Work. The County of Fresno, like the City of Fresno, requested that the intersections of Ashlan Avenue and Bryan Avenue and Dakota Avenue and Bryan Avenue be included in the analysis. Moreover, the County of Fresno requested that the Project's trip distribution be provided to them. The distribution of Project Only Trips is described in detail under the Existing plus Project and Cumulative Year plus Project Traffic Conditions scenarios.

Based on the comments received, this TIA includes the analysis of the additional intersections requested by the City and County of Fresno and the preparation of Warrants 1 and 2 for the unsignalized study intersections under the Existing Traffic Conditions scenario as requested by the City of Fresno. The Draft Scope of Work and the comments received from the lead agency and responsible agencies are included in Appendix A.

Study Facilities

The existing peak hour turning movement and segment volume counts were conducted at the study intersections and segments in March 2018 while schools in the vicinity of the proposed Project were in session. The intersection turning movement counts included pedestrian volumes. The traffic counts for the existing study intersections and segments are contained in Appendix B. The existing intersection turning movement volumes, intersection geometrics and traffic controls are illustrated in Figure 2.

Study Intersections:

1. Grantland Avenue / Ashlan Avenue
2. Bryan Avenue / Ashlan Avenue
3. Grantland Avenue / Dakota Avenue (Future)
4. Bryan Avenue / Dakota Avenue (Future)
5. Grantland Avenue / Project Driveway (Future)
6. Grantland Avenue / Shields Avenue
7. Grantland Avenue / Clinton Avenue

Study Segments:

1. Grantland Avenue between Ashlan Avenue and Dakota Avenue Alignment
2. Grantland Avenue between Dakota Avenue Alignment and Shields Avenue
3. Grantland Avenue between Shields Avenue and Clinton Avenue

Project Only Trips to State Facilities:

1. State Route 99 / Veterans Boulevard
2. State Route 99 / Ashlan Avenue

Study Scenarios

Existing Traffic Conditions

This scenario evaluates the Existing Traffic Conditions based on existing traffic volumes and roadway conditions from traffic counts and field surveys conducted in the year 2018.

Existing plus Project Traffic Conditions

This scenario evaluates total traffic volumes and roadway conditions based on the Existing plus Project Traffic Conditions. The Existing plus Project traffic volumes were obtained by adding the 2018 Project Only Trips to the Existing Traffic Conditions scenario. The 2018 Project Only Trips to the study intersections were developed based on existing travel patterns, the Fresno COG Project Select Zone, the existing roadway network, engineering judgment, existing residential and commercial densities, and the 2035 City of Fresno General Plan Circulation Element in the vicinity of the Project. The Fresno COG Models for the Project Select Zone are contained in Appendix C.

Near Term plus Project Traffic Conditions:

This scenario evaluates total traffic volumes and roadway conditions based on the Near Term plus Project Traffic Conditions. The Near Term plus Project traffic volumes were obtained by adding the Near Term related trips to the Existing plus Project Traffic Conditions scenario.

Cumulative Year 2035 No Project Traffic Conditions

This scenario evaluates total traffic volumes and roadway conditions based on the Cumulative Year 2035 No Project Traffic Conditions. The Cumulative Year 2035 No Project traffic volumes were obtained by subtracting the 2035 Project Only Trips from the Cumulative Year 2035 plus Project Traffic Conditions scenario.

Cumulative Year 2035 plus Project Traffic Conditions

This scenario evaluates total traffic volumes and roadway conditions based on the Cumulative Year 2035 plus Project Traffic Conditions. The Cumulative Year 2035 plus Project traffic volumes were obtained from the Fresno COG traffic model runs (Base Year 2018 and Cumulative Year 2035) and existing traffic counts. Under this scenario, the increment method, as recommended by the Model Steering Committee was utilized to determine the Cumulative Year 2035 plus Project traffic volumes. The Fresno COG Models are contained in Appendix C. It should be noted that this study assumes that Ashlan Avenue will be built west of Grantland Avenue and that Dakota Avenue would be built east of Grantland Avenue by the year 2035, resulting in changes in travel patterns and volumes.

Level of Service Analysis Methodology

Level of Service (LOS) is a qualitative index of the performance of an element of the transportation system. LOS is a rating scale running from "A" to "F", with "A" indicating no congestion of any kind and "F" indicating unacceptable congestion and delays. LOS in this study describes the operating conditions for signalized and unsignalized intersections.

The *2010 Highway Capacity Manual* (HCM) is the standard reference published by the Transportation Research Board and contains the specific criteria and methods to be used in assessing LOS. U-turn movements were analyzed using HCM 2000 methodologies and would yield more accurate results for the reason that HCM 2010 methodologies do not allow the analysis of U-turns. Synchro software was used to define LOS in this study. Details regarding these calculations are included in Appendix D.

Criteria of Significance

The 2035 City of Fresno General Plan has established various degrees of acceptable level of service (LOS) on its major streets, which are dependent on four (4) Traffic Impact Zones (TIZ) within the City. The standard LOS threshold for TIZ I is LOS F, that for TIZ II is LOS E, that for TIZ III is LOS D, and that for TIZ IV is LOS E. Additionally, the 2035 MEIR made findings of overriding consideration to allow a lower LOS threshold than that established by the underlying TIZ's. For those cases in which a LOS criterion for a roadway segment differs from that of the underlying TIZ, such criteria are identified in the roadway description. As all study facilities fall within TIZ III, LOS D is used to evaluate the potential significance of LOS impacts to intersections and segments within this TIA pursuant to the 2035 City of Fresno General Plan.

The County of Fresno has established LOS C as the acceptable level of traffic congestion on county roads and streets that fall entirely outside the Sphere of Influence (SOI) of a City. For those areas that fall within the SOI of a City, the LOS criteria of the City are the criteria of significance used in this report. LOS C is used to evaluate the potential significance of LOS impacts to Fresno County intersections and segments, which fall outside the City of Fresno SOI. In this case, all study facilities fall within the City of Fresno SOI and therefore the City of Fresno LOS is utilized.

Caltrans endeavors to maintain a target LOS at the transition between LOS C and D on State highway facilities consistent with the *Caltrans Guide for the Preparation of Traffic Impact Studies* dated December 2002. However, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. In this TIA, however, all study facilities fall within the City of Fresno. Therefore, the City of Fresno LOS thresholds are utilized.

Operational Analysis Assumptions and Defaults

The following operational analysis values, assumptions and defaults were used in this study to ensure a consistent analysis of LOS among the various scenarios.

- Yellow time consistent with the California Manual of Uniform Traffic Control Devices (CA MUTCD) based on approach speeds
- Yellow time of 3.2 seconds for left-turn phases
- All-red clearance intervals of 1.0 second for all phases
- Walk intervals of 7.0 seconds
- Flashing Don't Walk based on 3.5 feet/second walking speed with yellow plus all-red clearance subtracted and 2.0 seconds added
- All new or modified signals utilize protective left-turn phasing
- A 3 percent heavy vehicle factor
- The number of observed pedestrians at existing intersections was utilized under all study scenarios
- An average of 3 pedestrian calls per hour at signalized intersections
- An average of 10 pedestrian calls per hour per at the intersections of Ashlan Avenue and Grantland Avenue and Ashlan Avenue and Bryan Avenue in the Cumulative Year 2035 scenarios
- At existing intersections, the observed approach Peak Hour Factor (PHF) is utilized in the Existing, Existing plus Project and Near Term plus Project scenarios
- For the Cumulative Year 2035 scenarios, the following PHF's were utilized to reflect school traffic operations and an increase in future traffic volumes. As roadways start to reach their saturated flow rates, PHF's tend to increase to 0.90 or higher. The PHF's were established based on historical traffic counts collected by JLB for intersections in proximity of school sites.
  - For the intersections of Ashlan Avenue and Grantland Avenue and Ashlan Avenue and Bryan Avenue, the following PHF's were utilized.
    - A PHF of 0.86 during the AM peak
    - A PHF of 0.90 during the PM peak
  - A PHF of 0.92, or the existing PHF if higher, is utilized for all other intersections

Existing Traffic Conditions

Roadway Network

The Project site and surrounding study area are illustrated in Figure 1. Important roadways serving the Project are discussed below.

Grantland Avenue is an existing north-south two-lane undivided arterial adjacent to the proposed Project. In this area, Grantland Avenue extends south of Parkway Drive through the southern limits of the City of Fresno SOI. The 2035 City of Fresno General Plan Circulation Element designates Grantland Avenue as a two-lane arterial between Parkway Drive and Shaw Avenue, a four-lane collector between Shaw Avenue and Gettysburg Avenue, and a four-lane super arterial between Gettysburg Avenue and Belmont Avenue.

Ashlan Avenue is an existing east-west two-lane divided arterial in the vicinity of the proposed Project. In this area, Ashlan Avenue extends east of Grantland Avenue through the eastern limits of the City of Fresno SOI. The 2035 City of Fresno General Plan Circulation Element designates Ashlan Avenue as a four-lane divided arterial between Grantland Avenue and Fruit Avenue and east of Maroa Avenue and a two-lane collector between Fruit Avenue and Maroa Avenue.

Bryan Avenue is an existing north-south two-lane undivided collector in the vicinity of the proposed Project. In this area, Bryan Avenue exists between Shaw Avenue and McKinley Avenue. The 2035 City of Fresno General Plan Circulation Element designates Bryan Avenue as a two-lane collector between Shaw Avenue and Belmont Avenue.

Dakota Avenue is a future east-west two-lane undivided collector adjacent to the proposed Project. In this area, Dakota Avenue exists between Hayes Avenue and State Route 99. The 2035 City of Fresno General Plan Circulation Element designates Dakota Avenue as two-lane collector between Grantland Avenue and State Route 99.

Shields Avenue is an existing east-west two-lane undivided arterial in the vicinity of the proposed Project. In this area, Shields Avenue extends west of its connection to State Route 99 through the western limits of the City of Fresno SOI. The 2035 City of Fresno General Plan Circulation Element designates Shields Avenue as a two-lane collector west of State Route 99 through the City of Fresno SOI.

Clinton Avenue is an existing east-west two-lane undivided collector in the vicinity of the proposed Project. In this area, Clinton Avenue exists between Grantland Avenue and State Route 99. The 2035 City of Fresno General Plan Circulation Element designates Clinton Avenue as two-lane collector between Grantland Avenue and Polk Avenue and a four-lane collector between Polk Avenue and approximately 700 feet east of Marks Avenue.

Veterans Boulevard is planned as a six-lane divided super arterial in the vicinity of the proposed Project. Veterans Boulevard will ultimately connect to State Route 99 and Herndon Avenue to the north and Grantland Avenue to the south. The 2035 City of Fresno General Plan Circulation Element designates Veterans Boulevard as a six-lane super arterial. The 2035 City of Fresno General Plan Circulation Element acknowledged that additional lanes would be needed between Barstow Avenue and Riverside Drive; however, it established the criteria of significance for this segment at LOS E as a six-lane facility.

State Route 99 is an existing four- to six-lane freeway near the vicinity of the proposed Project. State Route 99 traverses the City of Fresno in a northwest-southeast direction and serves as the principal connection to various metropolitan areas within the Central San Joaquin Valley.

Dakota and Grantland (Single-Family Housing) - City of Fresno
Vicinity Map

Figure 1

JLB Traffic Engineering, Inc.
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004-055 - 03/22/18 - SM

Results of Existing Level of Service Analysis

Figure 2 illustrates the Existing Traffic Conditions turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Existing Traffic Conditions scenario are provided in Appendix E. Table I presents a summary of the Existing peak hour LOS at the study intersections, while Table II presents a summary of the Existing LOS for the study segments.

At present, the intersection of Bryan Avenue and Ashlan Avenue exceeds its LOS threshold during the AM peak period. To improve the LOS at this intersection, it is recommended that the following recommendations be implemented.

- Bryan Avenue and Ashlan Avenue
  - Modify the westbound through-right lane to a through lane; and
  - Add a westbound right-turn lane.

At present, all study segments operate at an acceptable LOS.

Table I: Existing Intersection LOS Results

ID	Intersection	Intersection Control	AM Peak Hour		PM Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	Grantland Avenue / Ashlan Avenue	One-Way Stop	11.4	B	10.7	B
2	Bryan Avenue / Ashlan Avenue	All-Way Stop	**38.3**	**E**	8.5	A
		All-Way Stop (Mitigated)	24.0	C	8.6	A
3	Grantland Avenue / Dakota Avenue	Does Not Exist	N/A	N/A	N/A	N/A
4	Bryan Avenue / Dakota Avenue	Does Not Exist	N/A	N/A	N/A	N/A
5	Grantland Avenue / Project Driveway	Does Not Exist	N/A	N/A	N/A	N/A
6	Grantland Avenue / Shields Avenue	All-Way Stop	10.0	A	8.4	A
7	Grantland Avenue / Clinton Avenue	One-Way Stop	9.5	A	9.5	A

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls
LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.

Table II: Existing Segment LOS Results

ID	Segment	Limits	Lanes	24-hour Volume	LOS
1	Grantland Avenue	Ashlan Avenue and Dakota Avenue	2	3,093	B
2	Grantland Avenue	Dakota Avenue and Shields Avenue	2	3,093	B
3	Grantland Avenue	Shields Avenue and Clinton Avenue	2	2,213	B

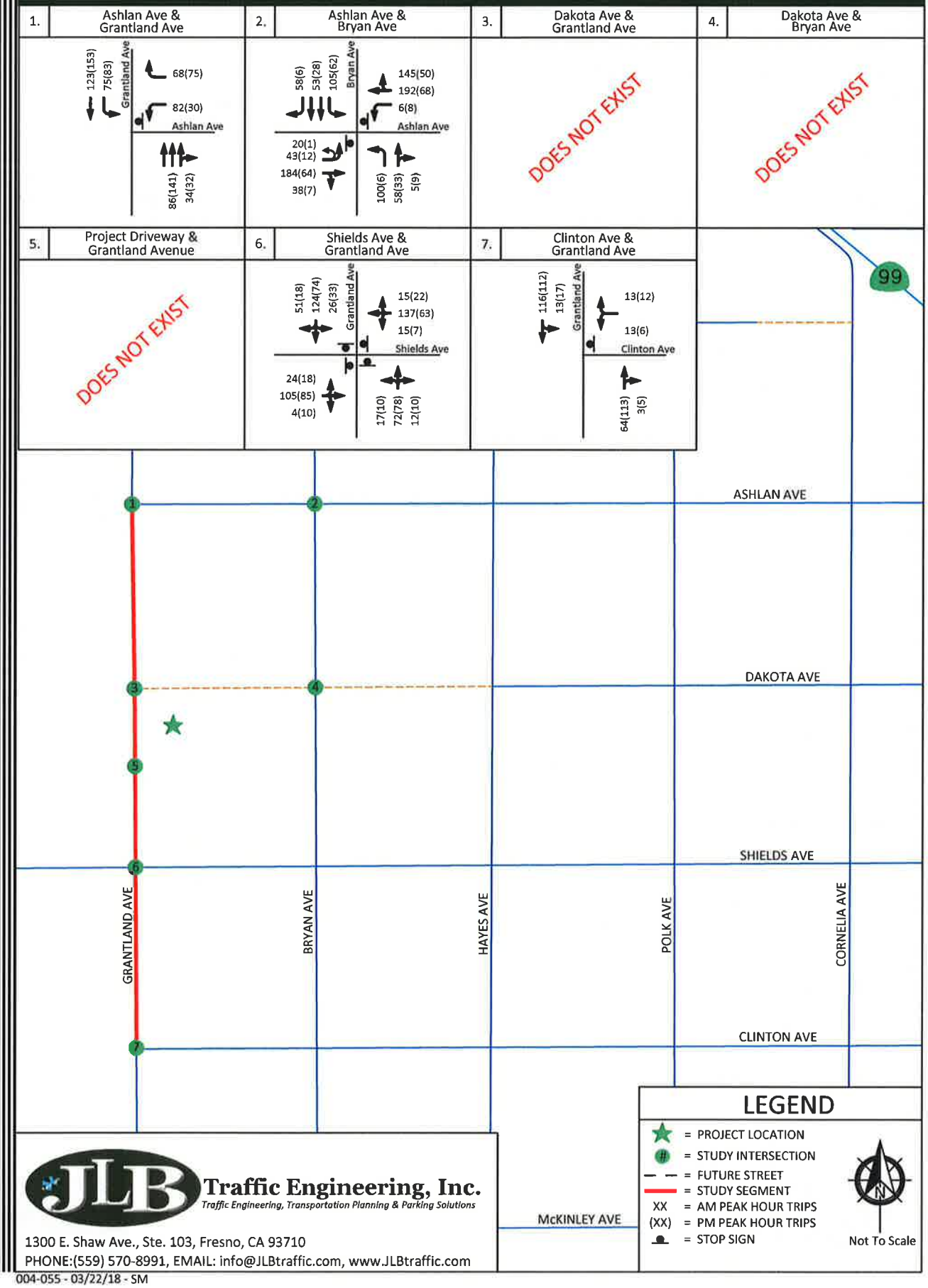
Note: LOS = Level of Service per the Florida Roadway Segment LOS Tables

Traffic Signal Warrants

Eight-hour and four-hour traffic signal warrants, as appropriate, were prepared for the unsignalized intersections in the Existing Traffic Conditions scenario. These warrants are found in Appendix J. These warrants were prepared pursuant to the CA MUTCD guidelines for the preparation of traffic signal warrants. Under this scenario, the none of the unsignalized intersections satisfy either signal warrants.

Dakota and Grantland (Single-Family Housing) - City of Fresno
Existing - Traffic Volumes, Geometrics and Controls

Figure 2



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Existing plus Project Traffic Conditions

Project Description

The Project proposes to develop up to 180 single-family residential units on approximately 30.00 acres on the southeast corner of the Dakota Avenue Alignment and Grantland Avenue. Based on information provided to JLB, the Project will undergo a General Plan Amendment to modify the land use for 10 acres of the Project site intended for High-Density Residential to allow Medium-Density Residential altogether (30.00 acres). Figure 1 shows the location of the proposed Project site relative to the surrounding roadway network.

Project Access

Based on information provided by the developer, access to and from the Project site will be from three (3) points. One access point is proposed on the south side of Dakota Avenue approximately 700 feet east of Grantland Avenue and is proposed as a full access. The remaining access points are proposed on the east side of Grantland Avenue. One is proposed approximately 475 feet south of Dakota Avenue and is proposed as a right-in, right-out access only, while the other is approximately 950 feet south of Dakota Avenue and is proposed as a left-in, right-in and right-out access only. The proposed left-in, right-in, right-out access point, labeled study intersection 5, was quantitatively analyzed for traffic operational impacts and LOS. JLB analyzed the location of the proposed access points relative to the existing local roads and driveways in the Project's vicinity. A review of the Project driveways to be constructed indicates that they are located at points the minimize traffic operational impacts to the existing roadway network.

JLB also analyzed the conceptual roadway connections to the Project. Based on this review, it is recommended that the Project incorporate the recommendations presented in more detail within the Queuing Analysis for the intersection of Grantland Avenue and Project Driveway, study intersection 5. It is recommended that access to the Project Driveway maintain a minimum throat depth of 50 feet before any vehicular openings to the north. By incorporating the recommendations presented in the Queuing Analysis, on-site and off-site traffic operations and circulation would be improved to acceptable levels.

Bikeways

Currently, bike lanes exist in the vicinity of the proposed Project site along Grantland Avenue, Ashlan Avenue and Bryan Avenue. The City of Fresno "Bicycle, Pedestrian & Trails Master Plan" recommends that Class II Bike Lanes be implemented on: 1) Grantland Avenue between Gettysburg Avenue and Belmont Avenue, 2) Ashlan Avenue east of Grantland Avenue, 3) Dakota Avenue east of Grantland Avenue, 4) Shields Avenue east of Grantland Avenue, and 5) Clinton Avenue east of Grantland Avenue. The City of Fresno "Bicycle, Pedestrian & Trials Master Plan" also recommends that Class I Bike Path be implemented on the east side of Grantland Avenue between Gettysburg Avenue and Belmont Avenue. Therefore, it is recommended that the Project implement Class II bike lanes along its frontages to Grantland Avenue and Dakota Avenue, and a Class I Bike Path on its frontage to Grantland Avenue.

Transit

Fresno Area Express (FAX) is the transit operator in the City of Fresno. At present, there are no FAX transit routes that operate in the vicinity of the proposed Project. The closest is FAX Route 9, which runs on Brawley Avenue and Shields Avenue, approximately 3.5 miles to the east of the proposed Project. Route 9 operates at 30-minute intervals on weekdays and weekends and its nearest stop to the Project site is located on the east side of Brawley Avenue approximately 200 feet north of Shields Avenue. This route provides a direct connection to Forestiere Underground Gardens, Fig Garden Shopping Center, Fashion Fair, Fresno State and Vinland Park. Retention of the existing and expansion of future transit routes is dependent on transit ridership demand and available funding.

Safe Routes to School

Kindergarten through 12th grade students from the Project will be served by the Central Unified School District. The Central Unified School District provides transportation for students who live in excess of an established radius zone. The zone is a radius of 1 mile for grades Kindergarten through 6th and 2.0 miles for grades 7th through 12th.

Based on the attendance area boundaries at the time of the preparation of this TIA, elementary school students would attend Harvest Elementary School located on the southwest corner of Bryan Avenue and Gettysburg Avenue. Harvest Elementary School is located 0.95 and 1.20 miles from the nearest and farthest future home on the Project. Therefore, it is anticipated that the majority of elementary school students will need to walk, bike or be driven to school.

The most direct path from the Project to the Harvest Elementary School campus would begin from either the westmost end of the Project along the east side of Grantland Avenue or the northmost end of the Project along the south side of Dakota Avenue. Students would proceed either north along the east side of Grantland Avenue or west along the south side of Dakota Avenue toward the intersection of Grantland Avenue and Dakota Avenue. With the construction of the Project, it is anticipated that the intersection of Grantland Avenue and Dakota Avenue will be controlled by a one-way stop on Dakota Avenue and have a marked crosswalk on the westbound approach of Dakota Avenue. Although there is a lack of walkways on the east side of Grantland Avenue, it is anticipated that students would proceed to cross Dakota Avenue along the east side of Grantland Avenue and continue heading north toward the intersection of Grantland Avenue and Ashlan Avenue. The intersection of Grantland Avenue and Ashlan Avenue is controlled by a one-way stop on Ashlan Avenue and contains a marked crosswalk on the westbound approach of Ashlan Avenue. It is anticipated that students would proceed to cross Ashlan Avenue along the east side of Grantland Avenue and head east along the north side of Ashlan Avenue toward the intersection of Bryan Avenue and Ashlan Avenue. Once at the intersection of Bryan Avenue and Ashlan Avenue, students would proceed north along the west side of Bryan Avenue until reaching a campus entrance.

Since the walking distance between the Project and the Harvest Elementary School campus is approximately 1.2 miles and there are no walkways in between, it is anticipated that a large percentage of elementary school students will likely be driven to school. To promote alternative modes of transportation to Harvest Elementary School, it is recommended that the Central Unified School District work with the City of Fresno and County of Fresno to implement a Safe Routes to School plan and to seek grant funding to help build bikeways and walkways where they are lacking within the one-mile radius of the existing school site.

Based on the attendance area boundaries at the time of the preparation of this TIA, middle school students would attend Glacier Point Middle School located on the northwest quadrant of Bryan Avenue and Ashlan Avenue. Glacier Point Middle School is located 0.60 and 0.87 miles from the nearest and farthest future home on the Project. Therefore, it is anticipated that middle school students will need to walk, bike or be driven to school.

The most direct path from the Project to the Glacier Point Middle School campus would begin from either the westmost end of the Project along the east side of Grantland Avenue or the northmost end of the Project along the south side of Dakota Avenue. Students would proceed either north along the east side of Grantland Avenue or west along the south side of Dakota Avenue toward the intersection of Grantland Avenue and Dakota Avenue. With the construction of the Project, it is anticipated that the intersection of Grantland Avenue and Dakota Avenue will be controlled by a one-way stop on Dakota Avenue and have a marked crosswalk on the westbound approach of Dakota Avenue. Although there is a lack of walkways on the east side of Grantland Avenue, it is anticipated that students would proceed to cross Dakota Avenue along the east side of Grantland Avenue and continue heading north toward the intersection of Grantland Avenue and Ashlan Avenue. The intersection of Grantland Avenue and Ashlan Avenue is controlled by a one-way stop on Ashlan Avenue and contains a marked crosswalk on the westbound approach of Ashlan Avenue. It is anticipated that students would proceed to cross Ashlan Avenue along the east side of Grantland Avenue and head east along the north side of Ashlan Avenue until reaching a campus entrance.

Since there are no walkways in between the Project and the Glacier Point Middle School campus, it is anticipated that a large percentage of middle school students will likely be driven to school. To promote alternative modes of transportation to Glacier Point Middle School, it is recommended that the Central Unified School District work with the City of Fresno and County of Fresno to implement a Safe Routes to School plan and to seek grant funding to help build bikeways and walkways where they are lacking within the two-mile radius of the existing school site.

Based on information from the Central Unified School District, 9th grade high school students would be provided with bus transportation to Central High School (West Campus) generally located at the northwest quadrant of McKinley Avenue and Dickenson Avenue. To a large degree, the majority of 10th through 12th grade high school students would attend Central High School (East Campus) located at the northwest corner of Dakota Avenue and Cornelia Avenue. Central High School (East Campus) is located 1.65 and 1.92 miles away from the nearest and farthest future home on the Project. Therefore, it is anticipated that high school students will need to walk, bike or be driven to school.

The most direct path from the Project to the Central High School (East Campus) would begin from the westmost end of the Project along the east side of Grantland Avenue. Although there is a lack of walkways on the east side of Grantland Avenue, students would proceed south along the east side of Grantland Avenue toward the intersection of Grantland Avenue and Shields Avenue. Although there is a lack of walkways on the north side of Shields Avenue, students would proceed east along the north side of Shields Avenue toward the intersection of Polk Avenue and Shields Avenue. The intersection of Polk Avenue and Shields Avenue is controlled by an all-way stop and contains unmarked crosswalks on all approaches. Although there is a lack of walkways on both sided of Polk Avenue, it is anticipated that students will proceed to cross Polk Avenue along the north side of Shields and proceed north along the east side of Polk Avenue toward the intersection of Polk Avenue and Dakota Avenue. Once at the intersection of Polk Avenue and Dakota Avenue, students would proceed east along the south side of Dakota Avenue toward the intersection of Forestiere Avenue and Dakota Avenue. The intersection of Forestiere Avenue and Dakota Avenue is controlled by a one-way stop on Forestiere Avenue and contains marked crosswalks on the northbound approach of Forestiere Avenue and the eastbound approach of Dakota Avenue. Students would proceed to cross Dakota Avenue along the east side of Forestiere Avenue to reach a campus entrance.

Since there are no walkways in between the Project and the Central High School (East Campus), it is anticipated that a large percentage of high school students will likely be driven to school. To promote alternative modes of transportation to Central High School (East Campus), it is recommended that the Central Unified School District work with the City of Fresno and County of Fresno to implement a Safe Routes to School plan and to seek grant funding to help build bikeways and walkways where they are lacking within the two-mile radius of the existing school site.

Trip Generation

Trip generation rates for the proposed Project were obtained from the 10th Edition of the Trip Generation Manual published by the Institute of Transportation Engineers (ITE). Table III presents the trip generation for the proposed Project with trip generation rates for Single-Family Detached Housing. At buildout, the proposed Project is estimated to generate a maximum of 1,699 daily trips, 133 AM peak hour trips and 178 PM peak hour trips. However, assuming that the proposed Project does not undergo a General Plan Amendment, the anticipated trip generation for the Project site would be slightly higher. Table IV presents the trip generation for the proposed Project with trip generation rates for Single-Family Detached Housing and Multi-Family Housing (highest density is assumed), consistent with the 2035 City of Fresno General Plan. Based on this, the proposed Project site has the potential to generate a maximum of 2,304 daily trips, 163 AM peak hour trips and 209 PM peak hour trips. Compared to the land use consistent with the 2035 City of Fresno General Plan, the proposed Project is estimated to yield less traffic by 605 daily trips, 30 AM peak hour trips and 31 PM peak hour trips. The difference in trip generation is summarized in Table V.

Table III: Proposed Project Trip Generation (General Plan Amendment)

Land Use (ITE Code)	Size	Unit	Daily		AM Peak Hour						PM Peak Hour					
			Rate	Total	Trip Rate	In %	Out %	In	Out	Total	Trip Rate	In %	Out %	In	Out	Total
Single-Family Detached Housing (210)	180	d.u.	9.44	1,699	0.74	25	75	33	100	133	0.99	63	37	112	66	178
Total Project Trips				**1,699**				**33**	**100**	**133**				**122**	**66**	**178**

Note: d.u. = Dwelling Units

Table IV: Project Site Trip Generation (Consistent with the 2035 General Plan)

Land Use (ITE Code)	Size	Unit	Daily		AM Peak Hour						PM Peak Hour					
			Rate	Total	Trip Rate	In %	Out %	In	Out	Total	Trip Rate	In %	Out %	In	Out	Total
Single-Family Detached Housing (210)	120	d.u.	9.44	1,133	0.74	25	75	22	67	89	0.99	63	37	75	44	119
Multifamily Housing (220)	160	d.u.	7.32	1,171	0.46	23	77	17	57	74	0.56	63	37	57	33	90
Total Project Trips				**2,304**				**39**	**124**	**163**				**132**	**77**	**209**

Note: d.u. = Dwelling Units

Table V: Difference in Trip Generation

	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Proposed Project Trip Generation (General Plan Amendment)	1,699	33	100	133	112	66	178
Proposed Project Trip Generation (Consistent with the 2035 General Plan)	2,304	39	124	163	132	77	209
Change in Trip Generation	**-605**	**-6**	**-24**	**-30**	**-20**	**-11**	**-31**

Trip Distribution

The trip distribution assumptions were developed based on existing travel patterns, the Fresno COG Project Select Zone, the existing roadway network, engineering judgement, data provided by the developer, knowledge of the study area, existing residential and commercial densities, and the 2035 City of Fresno General Plan Circulation Element in the vicinity of the Project. Figure 3 illustrates the 2018 Project Only Trips to the study intersections.

Results of Existing plus Project Level of Service Analysis

The Existing plus Project Traffic Conditions scenario assumes that the existing roadway geometrics and traffic controls will remain in place with two exceptions. This scenario assumes that the Project will construct a portion of Dakota Avenue east of Grantland Avenue and that it will built its frontage improvements to Grantland Avenue. Figure 4 illustrates the Existing plus Project turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Existing plus Project Traffic Conditions scenario are provided in Appendix F. Table VI presents a summary of the Existing plus Project peak hour LOS at the study intersections, while Table VII presents a summary of the Existing plus Project LOS for the study segments.

Under this scenario, the intersection of Bryan Avenue and Ashlan Avenue is projected to exceed its LOS threshold during the AM peak period. To improve the LOS at this intersection, it is recommended that the following recommendations be implemented.

- Bryan Avenue and Ashlan Avenue
  - Modify the westbound through-right lane to a through lane;
  - Add a westbound right-turn lane; and
  - Modify the intersection to accommodate the added lane.

Under this scenario, all study segments are projected to operate at an acceptable LOS.

Table VI: Existing plus Project Intersection LOS Results

ID	Intersection	Intersection Control	AM Peak Hour		PM Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	Grantland Avenue / Ashlan Avenue	One-Way Stop	11.8	B	11.5	B
2	Bryan Avenue / Ashlan Avenue	All-Way Stop	**41.6**	**E**	8.8	A
		All-Way Stop (Mitigated)	27.1	D	8.8	A
3	Grantland Avenue / Dakota Avenue	One-Way Stop	10.6	B	10.4	B
4	Bryan Avenue / Dakota Avenue	Does Not Exist	N/A	N/A	N/A	N/A
5	Grantland Avenue / Project Driveway	One-Way Stop	9.1	A	9.5	A
6	Grantland Avenue / Shields Avenue	All-Way Stop	11.0	B	8.8	A
7	Grantland Avenue / Clinton Avenue	One-Way Stop	9.6	A	9.8	A

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls
LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.

Table VII: Existing plus Project Segment LOS Results

ID	Segment	Limits	Lanes	24-hour Volume	LOS
1	Grantland Avenue	Ashlan Avenue and Dakota Avenue	2	3,983	B
2	Grantland Avenue	Dakota Avenue and Shields Avenue	2	3,903	B
3	Grantland Avenue	Shields Avenue and Clinton Avenue	2	2,394	B

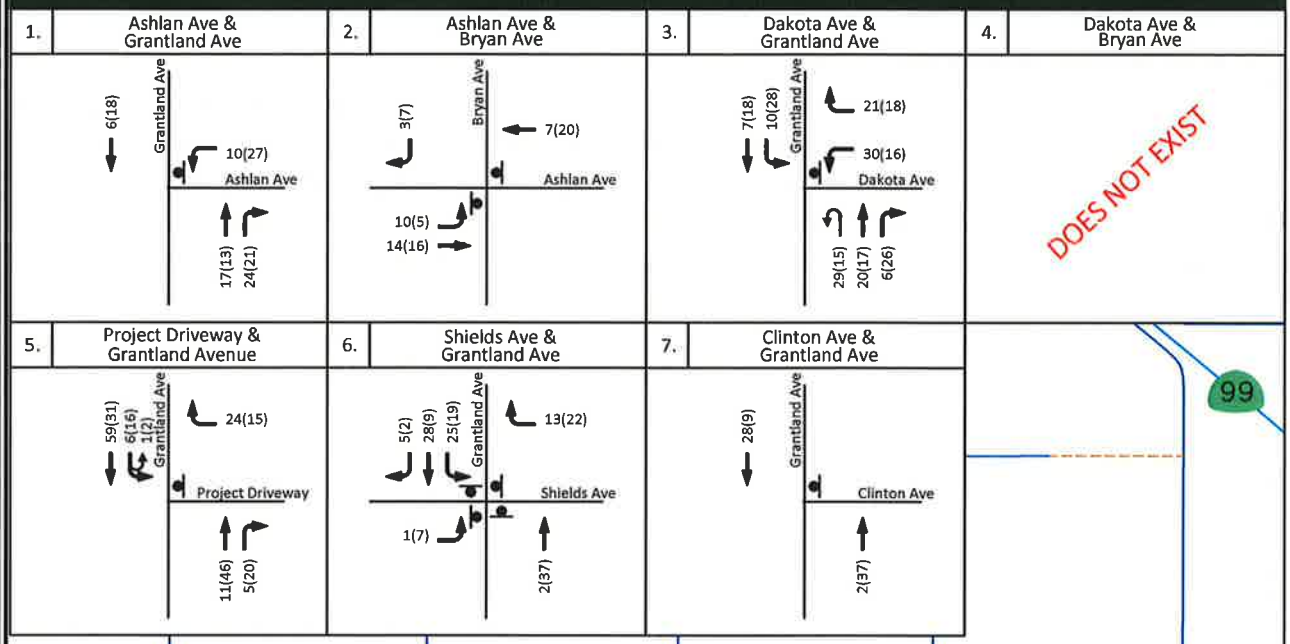
Note: LOS = Level of Service per the Florida Roadway Segment LOS Tables

Traffic Signal Warrants

Peak hour traffic signal warrants, as appropriate, were prepared for the unsignalized intersections in the Existing plus Project Traffic Conditions scenario. These warrants are found in Appendix J. The effects of right-turning traffic from the minor approach onto the major approach were taken into account using engineering judgement pursuant to the CA MUTCD guidelines for the preparation of traffic signal warrants. Under this scenario, the none of the unsignalized intersections satisfy the peak hour signal warrant.

Dakota and Grantland (Single-Family Housing) - City of Fresno
2018 Project Only Trips

Figure 3



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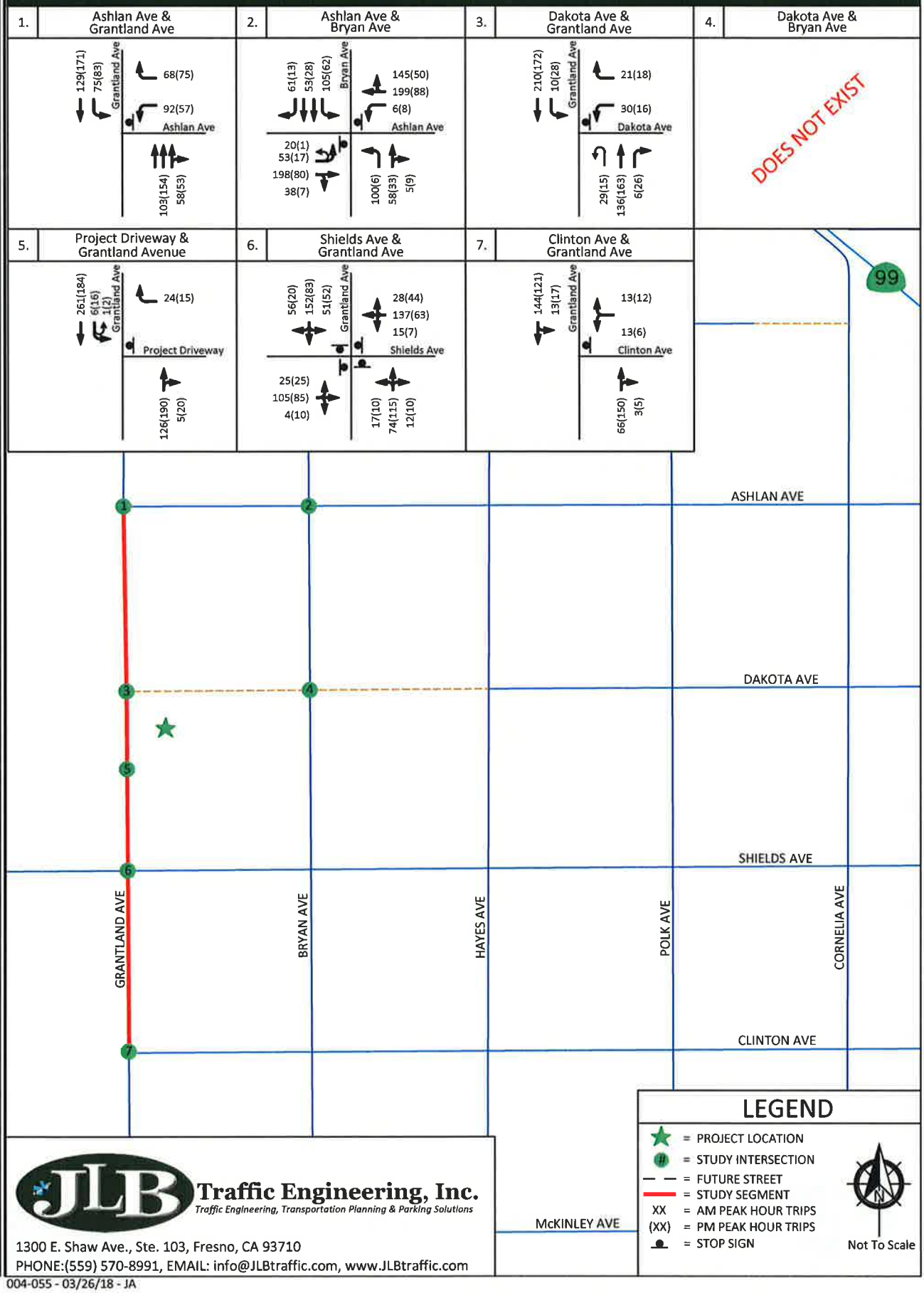
Dakota and Grantland (Single-Family Housing) - City of Fresno
Existing plus Project - Traffic Volumes, Geometrics and Controls

Figure 4



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Near Term plus Project Traffic Conditions

Description of Approved and Pipeline Projects

Approved and Pipeline Projects consist of developments that are either under construction, built but not fully occupied, are not built but have final site development review (SDR) approval, or for which the lead agency or responsible agencies have knowledge of. The City of Fresno, County of Fresno and Caltrans staff were consulted throughout the preparation of this TIA regarding approved and/or known projects that could potentially impact the study intersections. JLB staff conducted a reconnaissance of the surrounding area to confirm the near term projects. Subsequently, it was agreed that the projects listed in Table VIII were approved, near approval, or in the pipeline within the proximity of the proposed Project.

The trip generation listed in Table VIII is that which is anticipated to be added to the streets and highways by these projects between the time of the preparation of this report and five years after buildout of the proposed Project. As shown in Table VIII, the total trip generation for the near term projects is 53,404 daily trips, 4,071 AM peak hour trips and 5,164 PM peak hour trips. Figure 5 illustrates the location of the approved, near approval, or pipeline projects and their combined trip assignment to the study intersections and segments under the Near Term plus Project Traffic Conditions scenario.

Table VIII: Near Term Projects' Trip Generation

Approved Project Location	Approved or Pipeline Project Name	Daily Trips	AM Peak Hour	PM Peak Hour
A	TT 4983[1]	500	39	52
B	TT 5356[1]	85	7	9
C	TT 5363[1]	1,029	81	108
D	TT 5443[1]	2,672	209	280
E	TT 5444[1]	576	45	60
F	TT 5479[1]	1,152	90	121
G	TT 5493[1]	2,303	181	242
H	TT 5537[1]	378	30	40
I	TT 5538[1]	878	69	92
J	TT 5554[1]	406	32	43
K	TT 5586[1]	699	55	73
L	TT 5599 (portion of)[1]	396	31	42
M	TT 5604[1]	1,038	81	109
N	TT 5608[1]	747	47	57
O	TT 5631[1]	142	11	15
P	TT 5652[1]	1,633	128	171
Q	TT 5680[1]	1,661	130	174
R	TT 5695[1]	906	71	95
S	TT 5725[1]	893	56	68
T	TT 5756[1]	963	75	101
U	TT 5766[1]	170	13	18
V	TT 5808[1]	1,407	110	148
W	TT 5864[2]	1,152	90	121
X	TT 5891[1]	6,108	479	641
Y	TT 6056[3]	1190	94	125
Z	TT 6090[1]	330	26	35
AA	TT 6091[1]	76	6	8
AB	TT 6139[1]	963	75	101
AC	TT 6162[1]	765	60	80
AD	Herndon and Van Buren Mixed-Use Development[3]	5,372	357	419
AE	Herndon and Riverside Commercial Development[3]	1,897	134	139
AF	Shaw and 99 Mixed-Use Development[3]	2,425	232	237
AG	Johnny Quick Food Store[4]	2,833	202	215
AH	Jack-in-the-Box[3]	1,284	118	84
AI	Clinton and Blythe Commercial Development[3]	1,815	93	153
AJ	Clinton Avenue (Single-Family Housing)[3]	1,982	155	208
AK	Westlake Development (portion of)[5]	4,578	359	480
Total Approved and Pipeline Project Trips		**53,404**	**4,071**	**5,164**

Note: 1 = Trip Generation prepared by JLB Traffic Engineering, Inc. based on readily available information
2 = Trip Generation based on TJKM Traffic Impact Analysis Report
3 = Trip Generation based on JLB Traffic Engineering, Inc. Traffic Impact Analysis Report
4 = Trip Generation based on Precision Civil Engineering, Inc. Traffic Impact Analysis Report
5 = Trip Generation based on Peters Engineering Group Traffic Impact Analysis Report

Results of Near Term plus Project Level of Service Analysis

The Near Term plus Project Traffic Conditions scenario assumes the same roadway geometrics and traffic controls as those assumed in the Existing plus Project Traffic Conditions scenario. Figure 6 illustrates the Near Term plus Project turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Near Term plus Project Traffic Conditions scenario are provided in Appendix G. Table IX presents a summary of the Near Term plus Project peak hour LOS at the study intersections, while Table X presents a summary of the Near Term plus Project LOS for the study segments.

Under this scenario, the intersection of Bryan Avenue and Ashlan Avenue is projected to exceed its LOS threshold during the AM peak period. To improve the LOS at this intersection, it is recommended that this intersection be signalized with protective left-turn phasing in all directions.

Under this scenario, all study segments are projected to operate at an acceptable LOS.

Table IX: Near Term plus Project Intersection LOS Results

ID	Intersection	Intersection Control	AM Peak Hour		PM Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	Grantland Avenue / Ashlan Avenue	One-Way Stop	13.2	B	13.0	B
2	Bryan Avenue / Ashlan Avenue	All-Way Stop	**>120.0**	**F**	14.2	B
		All-Way Stop (Mitigated)	53.5	D	24.6	C
3	Grantland Avenue / Dakota Avenue	One-Way Stop	11.4	B	11.5	B
4	Bryan Avenue / Dakota Avenue	Does Not Exist	N/A	N/A	N/A	N/A
5	Grantland Avenue / Project Driveway	One-Way Stop	9.5	A	10.1	B
6	Grantland Avenue / Shields Avenue	All-Way Stop	12.9	B	9.7	A
7	Grantland Avenue / Clinton Avenue	One-Way Stop	9.8	A	9.8	A

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls
LOS for two-way and one-way STOP controlled intersections are based on the worst approach/movement of the minor street.

Table X: Near Term plus Project Segment LOS Results

ID	Segment	Limits	Lanes	24-hour Volume	LOS
1	Grantland Avenue	Ashlan Avenue and Dakota Avenue	2	5,393	B
2	Grantland Avenue	Dakota Avenue and Shields Avenue	2	5,313	B
3	Grantland Avenue	Shields Avenue and Clinton Avenue	2	2,784	B

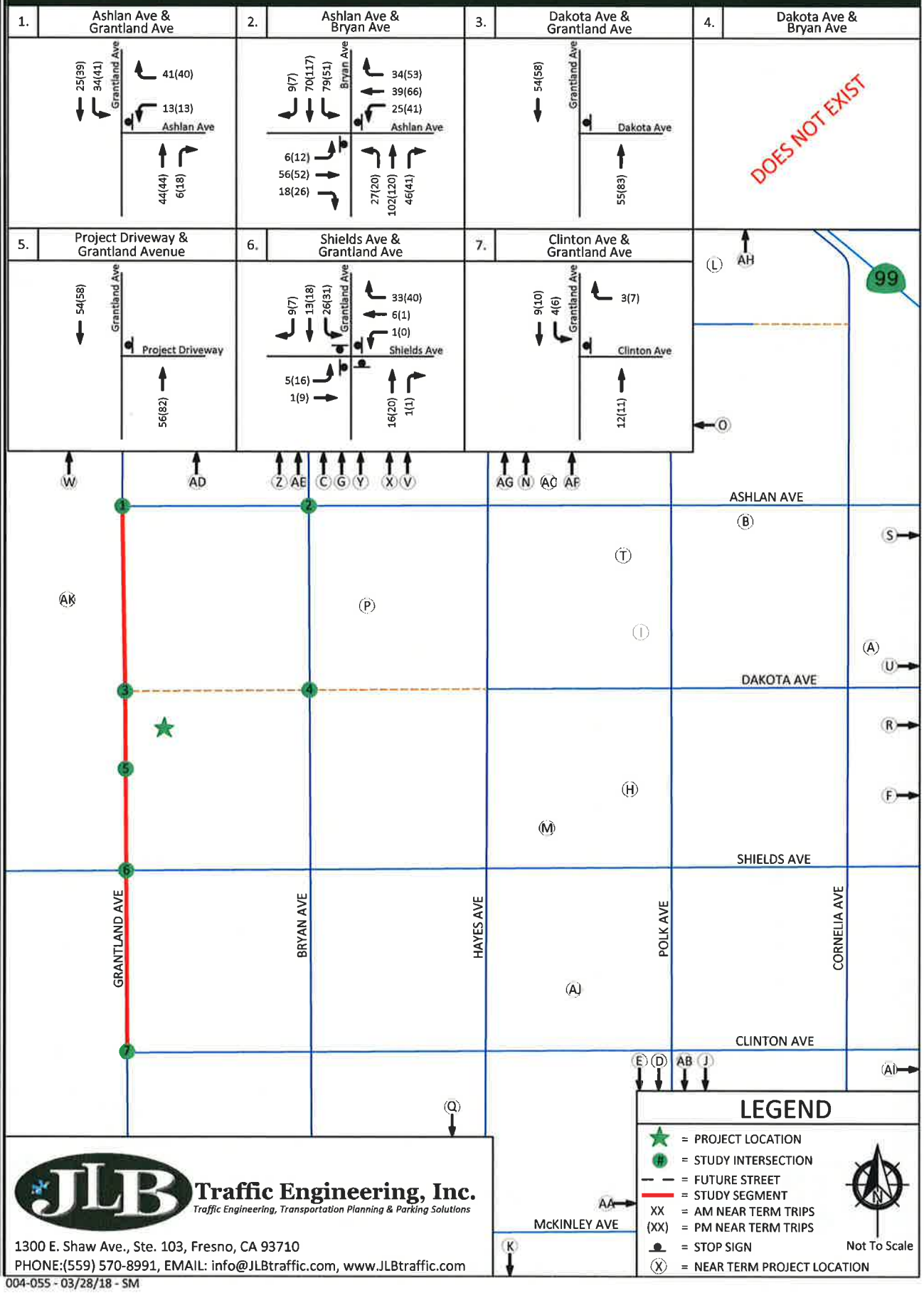
Note: LOS = Level of Service per the Florida Roadway Segment LOS Tables

Traffic Signal Warrants

Peak hour traffic signal warrants, as appropriate, were prepared for the unsignalized intersections in the Near Term plus Project Traffic Conditions scenario. These warrants are found in Appendix J. The effects of right-turning traffic from the minor approach onto the major approach were taken into account using engineering judgement pursuant to the CA MUTCD guidelines for the preparation of traffic signal warrants. Under this scenario, the intersection of Bryan Avenue and Ashlan Avenue satisfies the peak hour signal warrant during the AM peak period. Based on the signal warrant and engineering judgement, signalization of this intersection is recommended.

Dakota and Grantland (Single-Family Housing) - City of Fresno
Near Term Projects' Trip Assignment

Figure 5



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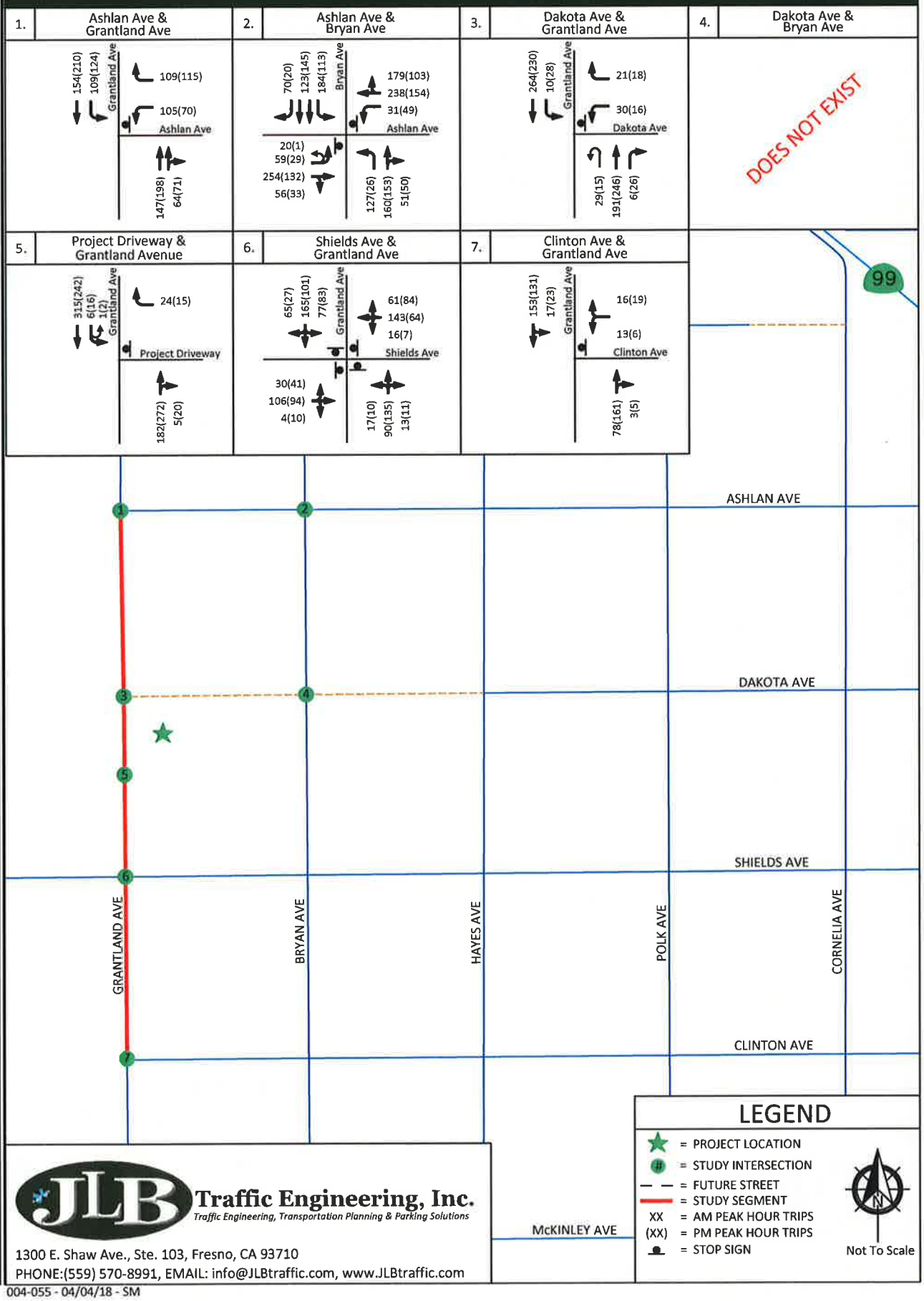
Dakota and Grantland (Single-Family Housing) - City of Fresno
Near Term plus Project - Traffic Volumes, Geometrics and Controls

Figure 6



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Cumulative Year 2035 No Project Traffic Conditions

The Cumulative Year 2035 No Project Traffic Conditions scenario assumes that the existing roadway geometrics and traffic controls will remain in place with two exceptions. For purposes of this TIA, it was assumed that Ashlan Avenue would be built as a two-lane undivided collector west of Grantland Avenue. Additionally, it was assumed that the Dakota Avenue extends to Grantland Avenue by the year 2035. It was assumed that Dakota Avenue would be built as a two-lane collector divided by a two-way left-turn lane between Grantland Avenue and Bryan Avenue and a two-lane undivided collector east of Bryan Avenue. Furthermore, it was assumed that the intersection of Grantland Avenue and Dakota Avenue would be controlled by a one-way stop on Dakota Avenue and contain a left-turn lane and a trap right-turn lane and that Bryan Avenue and Dakota Avenue would be controlled by a two-way stop on Dakota Avenue and contain a left-through-right lane on all approaches.

Results of Cumulative Year 2035 No Project Level of Service Analysis

The Cumulative Year 2035 No Project Traffic Conditions scenario assumes that Dakota Avenue will exist east of Grantland Avenue. Figure 7 illustrates the Cumulative Year 2035 No Project turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Cumulative Year 2035 No Project Traffic Conditions scenario are provided in Appendix H. Table XI presents a summary of the Cumulative Year 2035 No Project peak hour LOS at the study intersections, while Table XII presents a summary of the Cumulative year 2035 No Project LOS for the study segments.

Under this scenario, the intersections of Grantland Avenue and Ashlan Avenue, Bryan Avenue and Ashlan Avenue, Grantland Avenue and Dakota Avenue, Bryan Avenue and Dakota Avenue, Grantland Avenue and Shields Avenue, and Grantland Avenue and Clinton Avenue are projected to exceed their LOS threshold during one or both peak periods. To improve the LOS at the intersections projected to exceed their LOS threshold, it is recommended that the following improvements be implemented.

- Grantland Avenue and Ashlan Avenue
  - Modify the northbound through-right lane to a right-turn lane;
  - Add a second southbound left-turn lane with a receiving lane east of Grantland Avenue;
  - Add a second southbound through lane with a receiving lane south of Ashlan Avenue;
  - Signalize the intersection with protective left-turn phasing in all directions; and
  - Modify the intersection to accommodate the added lanes.
- Bryan Avenue and Ashlan Avenue
  - Modify the eastbound through-right lane to a through lane;
  - Add an eastbound right-turn lane;
  - Signalize the intersection with protective left-turn phasing in all directions; and
  - Modify the intersection to accommodate the added lane.
- Grantland Avenue and Dakota Avenue
  - Modify the northbound right-turn lane to a through-right lane with a receiving lane north of Dakota Avenue;
  - Add a second southbound through lane with a receiving lane south of Dakota Avenue; and
  - Modify the intersection to accommodate the added lanes.

- Bryan Avenue and Dakota Avenue
  - Add an eastbound left-turn lane;
  - Modify the eastbound left-through-right lane to a through-right lane;
  - Add a westbound left-turn lane;
  - Modify the westbound left-through-right lane to a through-right lane;
  - Add a northbound left-turn lane;
  - Modify the northbound left-through-right lane to a through-right lane;
  - Add a southbound left-turn lane;
  - Modify the southbound left-through-right lane to a through-right lane;
  - Signalize the intersection with protective left-turn phasing in all directions; and
  - Modify the intersection to accommodate the added lanes.
- Grantland Avenue and Shields Avenue
  - Add an eastbound left-turn lane;
  - Modify the eastbound left-through-right lane to a through-right lane;
  - Add a westbound left-turn lane;
  - Modify the westbound left-through-right lane to a through lane;
  - Add a westbound right-turn lane;
  - Add a northbound left-turn lane;
  - Modify the northbound left-through-right lane to a through lane;
  - Add a northbound through-right lane with a receiving lane north of Shields Avenue;
  - Add a southbound left-turn lane;
  - Modify the southbound left-through-right lane to a through lane;
  - Add a second southbound through lane with a receiving lane south of Shields Avenue;
  - Add a southbound right-turn lane;
  - Signalize the intersection with protective left-turn phasing in all directions; and
  - Modify the intersection to accommodate the added lanes.
- Grantland Avenue and Clinton Avenue
  - Add a westbound left-turn lane; and
  - Modify the intersection to accommodate the added lane.

Under this scenario, the segments of Grantland Avenue between Ashlan Avenue and Clinton Avenue are projected to operate at an unacceptable LOS. To improve the LOS of these segments, it is recommended that Grantland Avenue be modified to accommodate two lanes in each direction.

Table XI: Cumulative Year 2035 No Project Intersection LOS Results

ID	Intersection	Intersection Control	AM Peak Hour		PM Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	Grantland Avenue / Ashlan Avenue	Two-Way Stop	**>120.0**	**F**	**>120.0**	**F**
		Signalized (Mitigated)	54.9	D	44.7	D
2	Bryan Avenue / Ashlan Avenue	All-Way Stop	**>120.0**	**F**	22.5	C
		Signalized (Mitigated)	46.0	D	27.7	C
3	Grantland Avenue / Dakota Avenue	One-Way Stop	**105.3**	**F**	32.8	D
		One-Way Stop (Mitigated)	27.5	D	15.9	C
4	Bryan Avenue / Dakota Avenue	Two-Way Stop	**>120.0**	**F**	**73.4**	**F**
		Signalized (Mitigated)	45.9	D	18.7	B
5	Grantland Avenue / Project Driveway	Does Not Exist	N/A	N/A	N/A	N/A
6	Grantland Avenue / Shields Avenue	All-Way Stop	**>120.0**	**F**	**>120.0**	**F**
		Signalized (Mitigated)	41.5	D	33.7	C
7	Grantland Avenue / Clinton Avenue	One-Way Stop	**39.3**	**E**	26.5	D
		One-Way Stop (Mitigated)	29.5	D	24.5	C

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls.
LOS for two-way STOP controlled intersections are based on the worst approach/movement of the minor street.

Table XII: Cumulative Year 2035 No Project Segment LOS Results

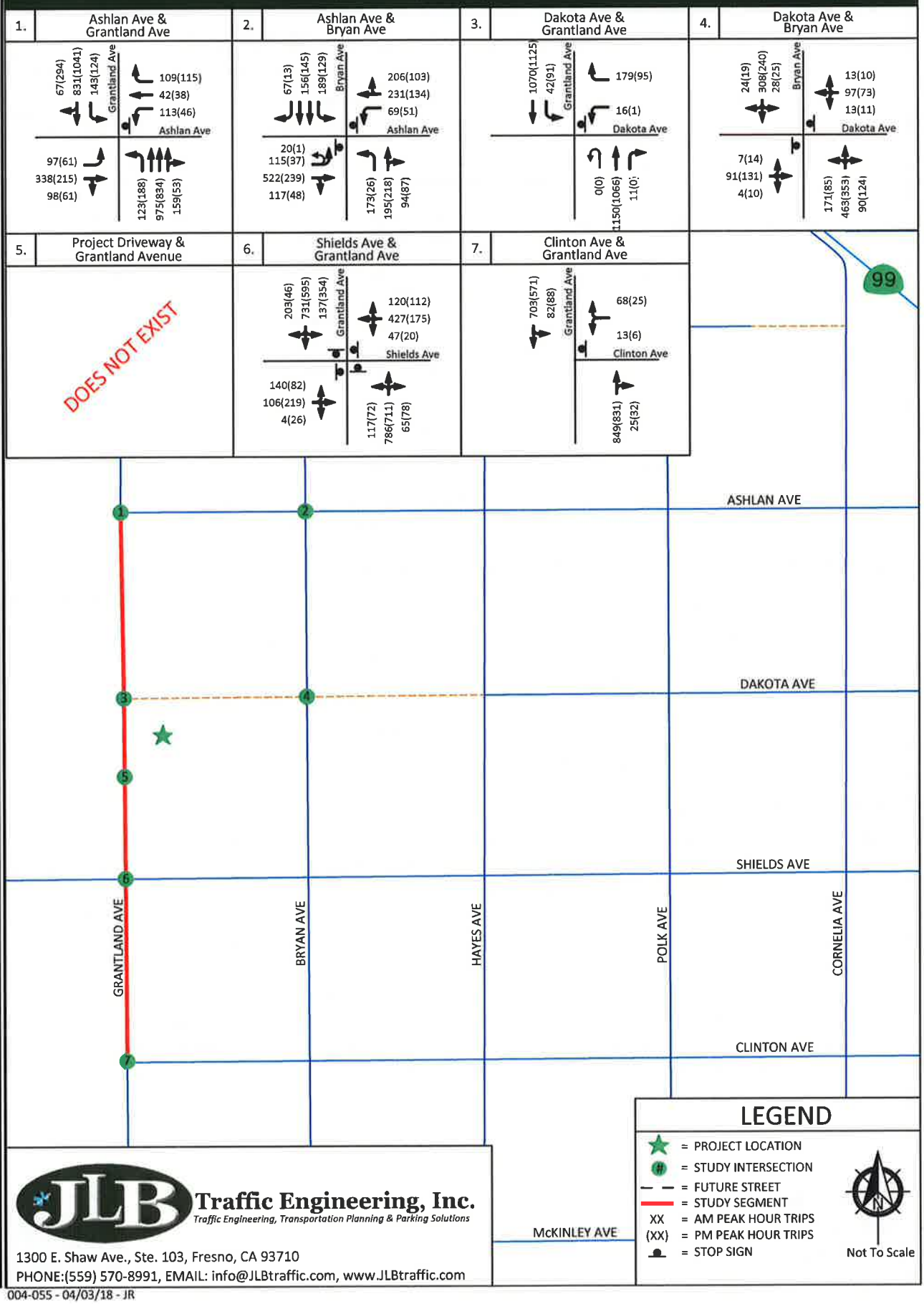
ID	Segment	Limits	Lanes	24-hour Volume	LOS
1	Grantland Avenue	Ashlan Avenue and Dakota Avenue	2	24,410	**E**
			4 (Mitigated)		C
2	Grantland Avenue	Dakota Avenue and Shields Avenue	2	22,470	**E**
			4 (Mitigated)		C
3	Grantland Avenue	Shields Avenue and Clinton Avenue	2	17,500	**E**
			4 (Mitigated)		B

Note: LOS = Level of Service per the Florida Roadway Segment LOS Tables

Traffic Signal Warrants

Peak hour traffic signal warrants, as appropriate, were prepared for the unsignalized intersections in the Cumulative Year 2035 No Project Traffic Conditions scenario. These warrants are found in Appendix J. The effects of right-turning traffic from the minor approach onto the major approach were taken into account using engineering judgement pursuant to the CA MUTCD guidelines for the preparation of traffic signal warrants. Under this scenario, the intersections of Grantland Avenue and Ashlan Avenue, Bryan Avenue and Ashlan Avenue, Bryan Avenue and Dakota Avenue, and Grantland Avenue and Shields Avenue satisfy the peak hour signal warrant during both peak periods. Based on the signal warrants and engineering judgement, signalization of these intersections is recommended. The intersection of Grantland Avenue and Dakota Avenue satisfies the peak hour signal warrant during the AM peak period only. Based on the signal warrant and engineering judgement, signalization of this intersection is also recommended.

Dakota and Grantland (Single-Family Housing) - City of Fresno — Figure 7
Cumulative Year 2035 No Project - Traffic Volumes, Geometrics and Controls



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Cumulative Year 2035 plus Project Traffic Conditions

The Cumulative Year 2035 plus Project Traffic Conditions scenario assumes that the Existing plus Project roadway geometrics and traffic controls will remain in place with a few exceptions. Similar to the Cumulative Year 2035 No Project Traffic Conditions scenario, the Cumulative Year 2035 plus Project Traffic Conditions scenario assumes the same changes in the roadway network. Considering the potential changes in the existing roadway network, it is projected that travel patterns and volumes may differ from what is anticipated for the immediate Project buildout. Figure 8 illustrates the 2035 Project Only Trips to the study intersections.

Results of Cumulative Year 2035 plus Project Level of Service Analysis

Figure 9 illustrates the Cumulative Year 2035 plus Project turning movement volumes, intersection geometrics and traffic controls. LOS worksheets for the Cumulative Year 2035 plus Project Traffic Conditions scenario are provided in Appendix I. Table XIII presents a summary of the Cumulative Year 2035 No Project peak hour LOS at the study intersections, while Table XIV presents a summary of the Cumulative year 2035 plus Project LOS for the study segments.

Under this scenario, the intersections of Grantland Avenue and Ashlan Avenue, Bryan Avenue and Ashlan Avenue, Grantland Avenue and Dakota Avenue, Bryan Avenue and Dakota Avenue, Grantland Avenue and Shields Avenue, and Grantland Avenue and Clinton Avenue are projected to exceed their LOS threshold during one or both peak periods. To improve the LOS at the intersections projected to exceed their LOS threshold, it is recommended that the following improvements be implemented.

- Grantland Avenue and Ashlan Avenue
  - Modify the northbound through-right lane to a right-turn lane;
  - Add a second southbound left-turn lane with a receiving lane east of Grantland Avenue;
  - Modify the southbound through-right lane to a through lane;
  - Add a second southbound through lane with a receiving lane south of Ashlan Avenue;
  - Add a southbound right-turn lane;
  - Implement overlap phasing of the southbound right-turn with the eastbound left-turn phase;
  - Signalize the intersection with protective left-turn phasing in all directions; and
  - Modify the intersection to accommodate the added lanes.
- Bryan Avenue and Ashlan Avenue
  - Modify the eastbound through-right lane to a through lane;
  - Add an eastbound right-turn lane;
  - Signalize the intersection with protective left-turn phasing in all directions; and
  - Modify the intersection to accommodate the added lane.
- Grantland Avenue and Dakota Avenue
  - Modify the northbound right-turn lane to a through-right lane with a receiving lane north of Dakota Avenue;
  - Add a second southbound through lane with a receiving lane south of Dakota Avenue; and
  - Modify the intersection to accommodate the added lanes.

- Bryan Avenue and Dakota Avenue
  - Add an eastbound left-turn lane;
  - Modify the eastbound left-through-right lane to a through-right lane;
  - Add a westbound left-turn lane;
  - Modify the westbound left-through-right lane to a through-right lane;
  - Add a northbound left-turn lane;
  - Modify the northbound left-through-right lane to a through-right lane;
  - Add a southbound left-turn lane;
  - Modify the southbound left-through-right lane to a through-right lane;
  - Signalize the intersection with protective left-turn phasing in all directions; and
  - Modify the intersection to accommodate the added lanes.
- Grantland Avenue and Shields Avenue
  - Add an eastbound left-turn lane;
  - Modify the eastbound left-through-right lane to a through-right lane;
  - Add a westbound left-turn lane;
  - Modify the westbound left-through-right lane to a through lane;
  - Add a westbound right-turn lane;
  - Add a northbound left-turn lane;
  - Modify the northbound left-through-right lane to a through lane;
  - Add a northbound through-right lane with a receiving lane north of Shields Avenue;
  - Add a southbound left-turn lane;
  - Modify the southbound left-through-right lane to a through lane;
  - Add a second southbound through lane with a receiving lane south of Shields Avenue;
  - Add a southbound right-turn lane;
  - Signalize the intersection with protective left-turn phasing in all directions; and
  - Modify the intersection to accommodate the added lanes.
- Grantland Avenue and Clinton Avenue
  - Add a westbound left-turn lane; and
  - Modify the intersection to accommodate the added lane.

Under this scenario, the segments of Grantland Avenue between Ashlan Avenue and Clinton Avenue are projected to operate at an unacceptable LOS. To improve the LOS of these segments, it is recommended that Grantland Avenue be modified to accommodate two lanes in each direction.

Table XIII: Cumulative Year 2035 plus Project Intersection LOS Results

ID	Intersection	Intersection Control	AM Peak Hour		PM Peak Hour	
			Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS
1	Ashlan Avenue / Grantland Avenue	Two-Way Stop	**>120.0**	**F**	**>120.0**	**F**
		Signalized (Mitigated)	50.7	D	41.5	D
2	Ashlan Avenue / Bryan Avenue	All-Way Stop	**>120.0**	**F**	22.8	C
		Signalized (Mitigated)	50.6	D	34.7	C
3	Dakota Avenue / Grantland Avenue	One-Way Stop	**>120.0**	**F**	**>120.0**	**F**
		Signalized (Mitigated)	20.4	C	10.1	B
4	Dakota Avenue / Bryan Avenue	Two-Way Stop	**>120.0**	**F**	**106.5**	**F**
		Signalized (Mitigated)	20.1	C	38.6	D
5	Project Driveway / Grantland Avenue	One-Way Stop	24.3	C	21.8	C
6	Shields Avenue / Grantland Avenue	All-Way Stop	**>120.0**	**F**	**>120.0**	**F**
		Signalized (Mitigated)	51.6	D	42.2	D
7	Clinton Avenue / Grantland Avenue	One-Way Stop	**41.7**	**E**	28.7	D
		One-Way Stop (Mitigated)	30.7	D	26.5	D

Note: LOS = Level of Service based on average delay on signalized intersections and All-Way STOP Controls.
LOS for two-way STOP controlled intersections are based on the worst approach/movement of the minor street.

Table XIV: Cumulative Year 2035 plus Project Segment LOS Results

ID	Segment	Limits	Lanes	24-hour Volume	LOS
1	Grantland Avenue	Ashlan Avenue and Dakota Avenue	2	25,006	**E**
			4 (Mitigated)		C
2	Grantland Avenue	Dakota Avenue and Shields Avenue	2	22,800	**E**
			4 (Mitigated)		C
3	Grantland Avenue	Shields Avenue and Clinton Avenue	2	17,719	**E**
			4 (Mitigated)		B

Note: LOS = Level of Service per the Florida Roadway Segment LOS Tables

Traffic Signal Warrants

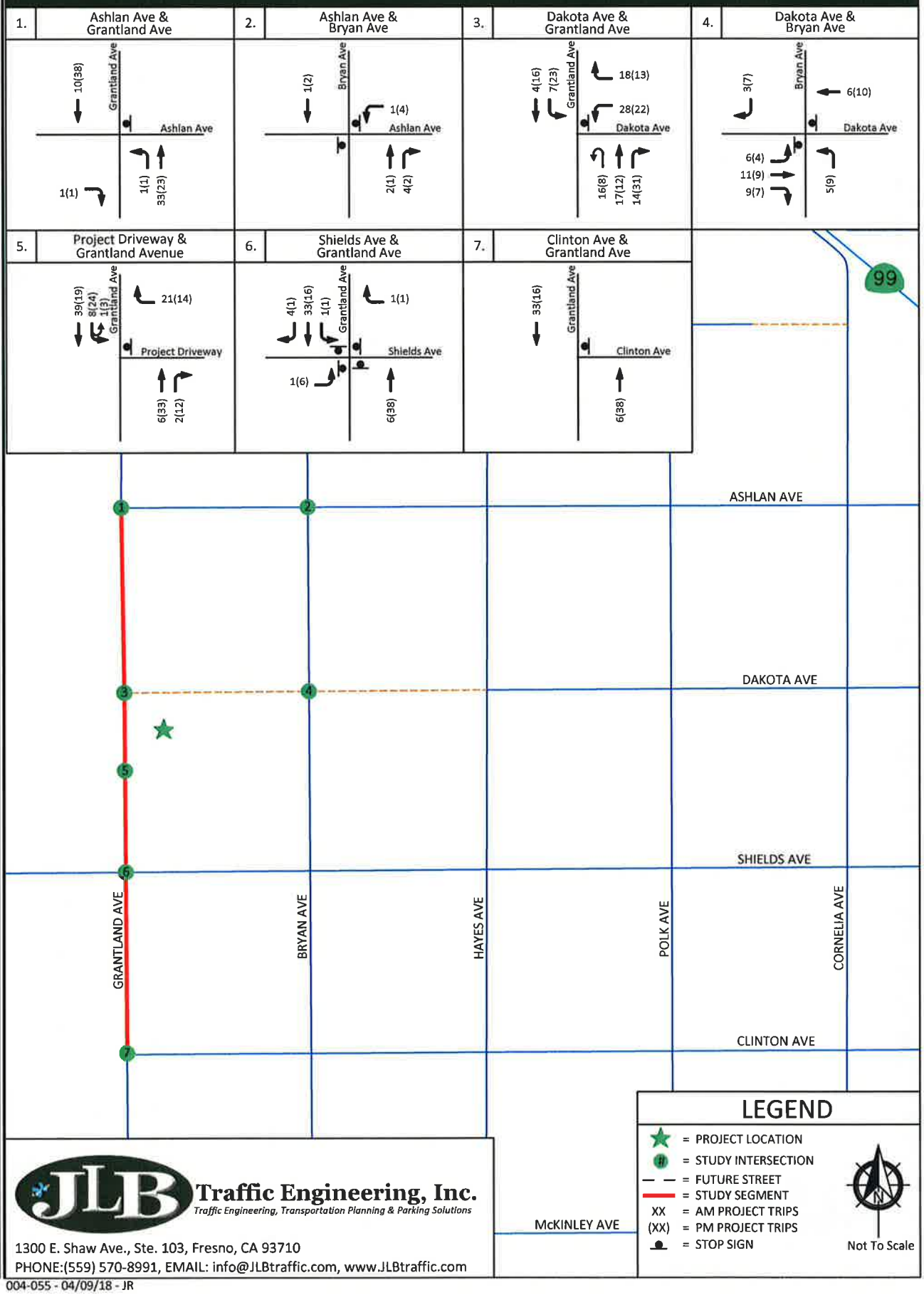
Peak hour traffic signal warrants, as appropriate, were prepared for the unsignalized intersections in the Cumulative Year 2035 plus Project Traffic Conditions scenario. These warrants are found in Appendix J. The effects of right-turning traffic from the minor approach onto the major approach were taken into account using engineering judgement pursuant to the CA MUTCD guidelines for the preparation of traffic signal warrants. Under this scenario the intersections of Grantland Avenue and Ashlan Avenue, Bryan Avenue and Ashlan Avenue, Bryan Avenue and Dakota Avenue, and Grantland Avenue and Shields Avenue satisfy the peak hour signal warrant during both peak periods. Based on the signal warrants and engineering judgement, signalization of these intersections is recommended. The intersection of Grantland Avenue and Dakota Avenue satisfies the peak hour signal warrant during the AM peak period only. Based on the signal warrant and engineering judgement, signalization of this intersection is also recommended.

Project's Trip Assignment to Caltrans Facilities

The 2035 Project Only Trip assignment to the interchanges of State Route 99 at Veterans Boulevard and Ashlan Avenue are illustrated in Figures 10 and 11, respectively.

Dakota and Grantland (Single-Family Housing) - City of Fresno
2035 Project Only Trips

Figure 8



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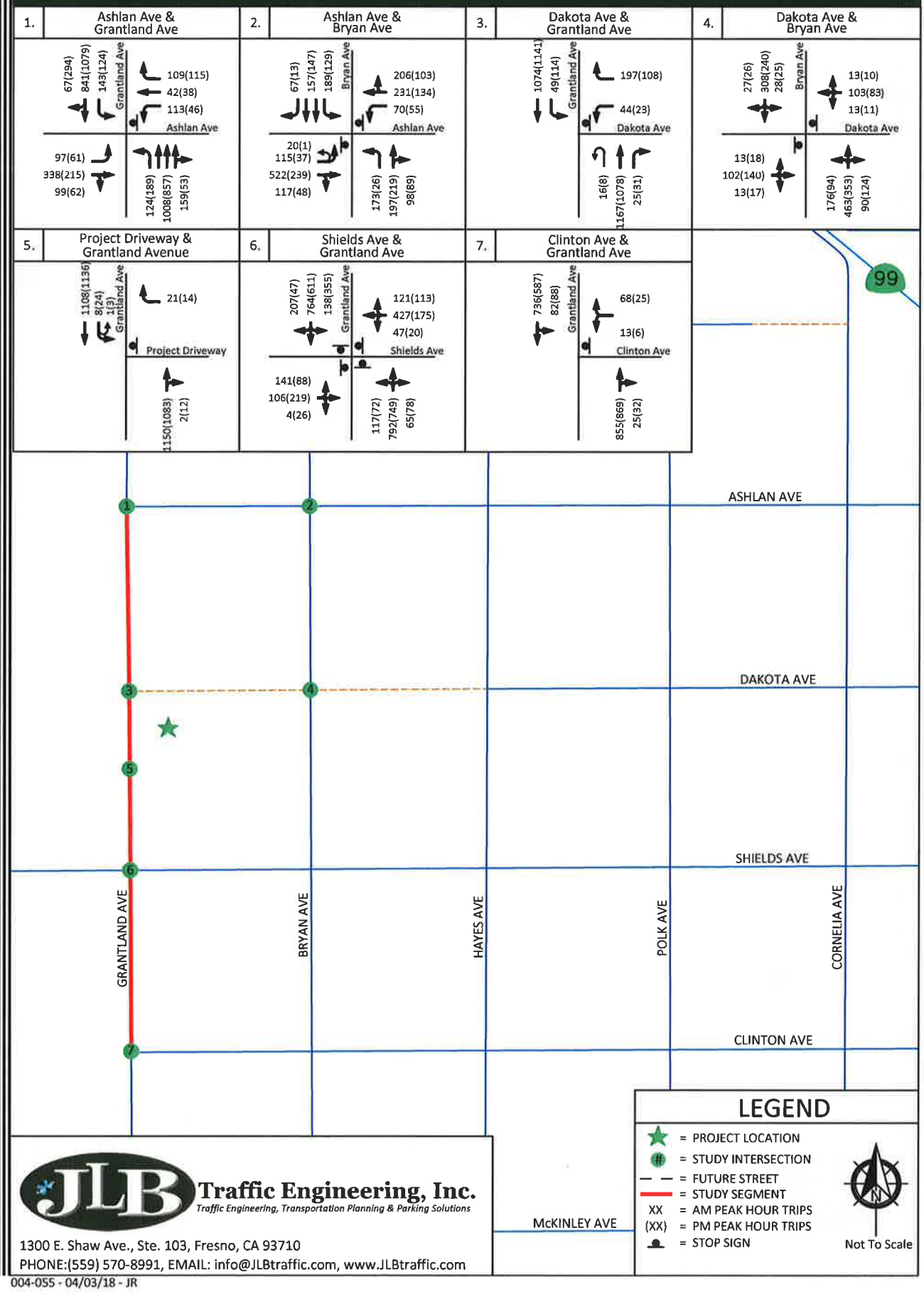
Dakota and Grantland (Single-Family Housing) - City of Fresno — Figure 9
Cumulative Year 2035 plus Project - Traffic Volumes, Geometrics and Controls



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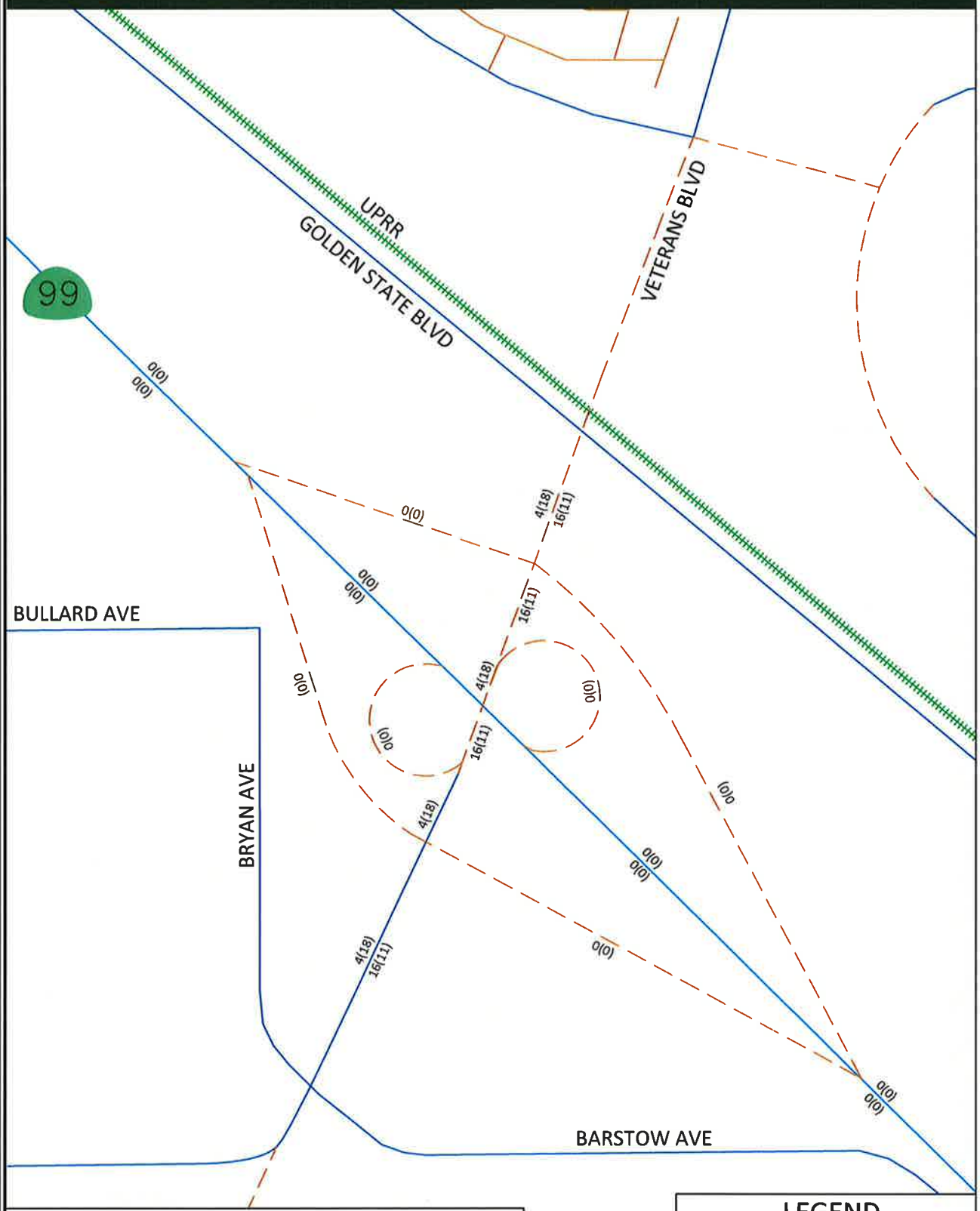
Dakota and Grantland (Single-Family Housing) - City of Fresno
SR 99 at Veterans Boulevard Interchange - 2035 Project Only Trips

Figure 10



LEGEND

— — = FUTURE STREET
XX = AM PROJECT TRIPS
(XX) = PM PROJECT TRIPS

Not To Scale

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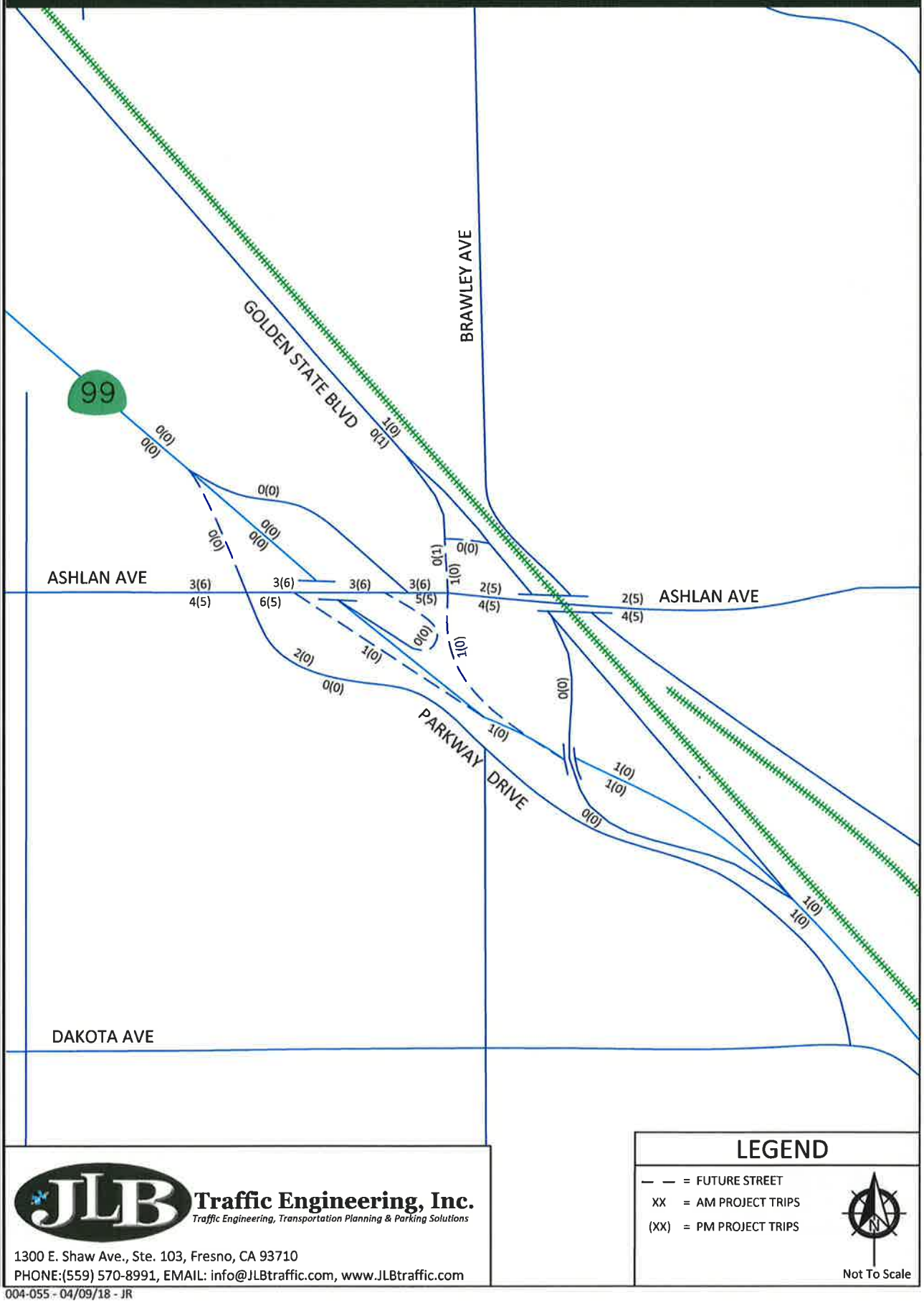
Dakota and Grantland (Single-Family Housing) - City of Fresno
SR 99 at Ashlan Avenue Interchange - 2035 Project Only Trips

Figure 11



LEGEND

— — = FUTURE STREET
XX = AM PROJECT TRIPS
(XX) = PM PROJECT TRIPS

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Queuing Analysis

Table XV provides a queue length summary for left- and right-turn lanes at the study intersections under all study scenarios. The queuing analyses for the study intersections are contained in the LOS worksheets for the respective scenarios. Appendix D contains the methodologies used to evaluate these intersections.

Queuing analyses were completed using Sim Traffic output information. Synchro provides both 50th and 95th percentile maximum queue lengths (in feet). According to the Synchro manual, "the 50th percentile maximum queue is the maximum back of queue on a typical cycle and the 95th percentile queue is the maximum back of queue with 95th percentile volumes." The queues shown on Table XV are the 95th percentile queue lengths for the respective lane movements.

The Highway Design Manual (HDM) provides guidance for determining deceleration lengths for the left- and right-turn lanes based on design speeds. Per the HDM criteria, "tapers for right-turn lanes are usually un-necessary since the main line traffic need not be shifted laterally to provide space for the right-turn lane. If, in some rare instances, a lateral shift were needed, the approach taper would use the same formula as for a left-turn lane." Therefore, a bay taper length pursuant to the Caltrans HDM would need to be added, as necessary, to the recommended storage lengths presented in Table XV.

Based on the SimTraffic output files and engineering judgement, it is recommended that the storage capacity for the following be considered for the Cumulative Year 2035 plus Project Traffic Conditions.

- Grantland Avenue and Ashlan Avenue
  - While the projected queuing demand for the eastbound left-turn lane is anticipated to exceed 250 feet, it is recommended that the storage capacity for this movement be set based on studies specifically prepared by the development project(s) to be served by this movement.
  - Consider setting the storage capacity of the northbound left-turn lane based on studies specifically prepared by the development project(s) to be served by this movement.
  - Consider setting the storage capacity of the northbound right-turn lane to 250 feet.
  - The existing storage capacity of the southbound left-turn lane is projected to exceed that available for the PM peak period in the Cumulative Year 2035 No Project Traffic Conditions scenario. However, it is recommended that this movement be monitored.
  - Consider setting the storage capacity of the southbound right-turn lane based on studies specifically prepared by the development project(s) to be served by this movement.
- Bryan Avenue and Ashlan Avenue
  - Consider setting the storage capacity of the eastbound right-turn lane to 150 feet.
  - The existing storage capacity of the northbound left-turn lane is projected to exceed that available for the AM peak period in the Cumulative Year 2035 No Project Traffic Conditions scenario. While there are no constraints to increasing the storage capacity of this movement, it is recommended that this movement be monitored.
  - Consider increasing the storage capacity of the southbound left-turn lane to 225 feet.

- Grantland Avenue and Dakota Avenue
  - While the projected queuing demand for the westbound left-turn lane is anticipated to be 85 feet, it is recommended that the storage capacity for this movement be set to 200 feet as a means to prevent blocking from the westbound right-turn lane.
  - Consider setting the storage capacity of the northbound left-turn lane to 150 feet.
  - Consider setting the storage capacity of the southbound left-turn lane to 175 feet.
- Bryan Avenue and Dakota Avenue
  - Consider setting the storage capacity of the eastbound left-turn lane to 75 feet.
  - Consider setting the storage capacity of the westbound left-turn lane to 75 feet.
  - Consider setting the storage capacity of the northbound left-turn lane to 200 feet.
  - Consider setting the storage capacity of the southbound left-turn lane to 75 feet.
- Grantland Avenue and Project Driveway
  - In an effort to improve onsite and off-site circulation, it is recommended that the Project Driveway maintain a minimum throat depth of 50 feet before any vehicular openings to the north.
  - Consider setting the storage capacity of the southbound left-turn lane to 75 feet.
- Grantland Avenue and Shields Avenue
  - Consider setting the storage capacity of the eastbound left-turn lane to 175 feet.
  - Consider setting the storage capacity of the westbound left-turn lane to 225 feet.
  - While the projected queuing demand for the westbound right-turn lane is anticipated to be 325 feet, it is recommended that the storage capacity for this movement be set to 150 feet.
  - Consider setting the storage capacity of the northbound left-turn lane to 225 feet.
  - Consider setting the storage capacity of the southbound left-turn lane to 375 feet.
  - Consider setting the storage capacity of the southbound right-turn lane to 125 feet.
- Grantland Avenue and Clinton Avenue
  - While the projected queuing demand for the westbound left-turn lane is anticipated to be 49 feet, it is recommended that the storage capacity for this movement be set to 75 feet as a means to prevent blocking from the westbound right-turn lane.

Table XV: Queuing Analysis

ID	Intersection	Existing Queue Storage Length (ft.)		Existing		Existing plus Project		Near Term plus Project		Cumulative Year 2035 No Project		Cumulative Year 2035 plus Project	
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Grantland Avenue / Ashlan Avenue	EB Left	*	*	*	*	*	*	*	354	109	200	108
		WB Left	230	64	38	47	51	59	60	165	110	167	79
		WB Right	>500	48	45	36	42	58	52	64	57	59	60
		NB Left	*	*	*	*	*	*	*	430	455	297	316
		NB Right	*	*	*	*	*	*	*	150	44	235	38
		SB Left	250	38	21	22	46	41	51	*	*	*	*
		SB Dual Lefts	250	*	*	*	*	*	*	133	293	108	94
		SB Right	*	*	*	*	*	*	*	*	*	21	98
2	Bryan Avenue / Ashlan Avenue	EB Left	250	52	29	57	35	104	55	191	53	161	66
		EB Right	*	*	*	*	*	*	*	40	35	133	21
		WB Left	250	17	27	22	23	71	79	122	94	172	100
		WB Right	*	52	44	52	53	*	*	*	*	*	*
		NB Left	250	44	21	51	18	136	41	303	41	215	45
		SB Left	150	*	*	*	*	151	92	205	139	216	203
		SB Right	150	*	*	*	*	57	25	43	25	52	22
3	Grantland Avenue / Dakota Avenue	WB Left	*	*	*	34	20	28	25	50	13	85	60
		WB Right	>500	*	*	37	27	21	36	176	76	142	90
		NB Left	*	*	*	18	21	16	17	*	*	43	44
		SB Left	*	*	*	0	23	0	20	51	87	80	174
4	Bryan Avenue / Dakota Avenue	EB Left	*	*	*	*	*	*	*	37	36	27	44
		WB Left	*	*	*	*	*	*	*	36	30	34	47
		NB Left	*	*	*	*	*	*	*	200	99	141	95
		SB Left	*	*	*	*	*	*	*	40	52	49	49
5	Grantland Avenue / Project Driveway	WB Right	*	*	*	44	34	37	32	*	*	41	38
		SB Left	*	*	*	0	22	0	8	*	*	13	44
6	Grantland Avenue / Shields Avenue	EB Left	*	*	*	*	*	*	*	169	99	149	90
		WB Left	*	*	*	*	*	*	*	82	38	205	52
		WB Right	*	*	*	*	*	*	*	150	69	325	76
		NB Left	*	*	*	*	*	*	*	150	91	222	107
		SB Left	*	*	*	*	*	*	*	214	379	276	315
		SB Right	*	*	*	*	*	*	*	102	25	120	26
7	Grantland Avenue / Clinton Avenue	WB Left	*	*	*	*	*	*	*	39	21	49	33
		WB Right	>500	*	*	*	*	*	*	45	47	59	46

Note: * = Does not exist or is not projected to exist

Project's Pro-Rata Fair Share of Future Transportation Improvements

The Project's fair share percentage impact to study intersections projected to fall below their LOS threshold and which are not covered by an existing impact fee program is provided in Table XVI. The Project's fair share percentage impacts were calculated pursuant to the Caltrans Guide for the Preparation of Traffic Impact Studies. The Project's pro-rata fair shares were calculated utilizing the Existing volumes, 2035 Project Only Trips and Cumulative Year 2035 plus Project volumes. Figure 2 illustrates the Existing traffic volumes, Figure 8 illustrates the 2035 Project Only Trips, and Figure 9 illustrates the Cumulative Year 2035 plus Project traffic volumes. Since the critical peak period for the study facilities was determined to be during the PM peak, the PM peak volumes are utilized to determine the Project's pro-rata fair share.

It is recommended that the Project contribute its equitable fair share as listed in Table XVI for the future improvements necessary to maintain an acceptable LOS. However, fair share contributions should only be made for those facilities or portion thereof currently not funded by the responsible agencies roadway impact fee program(s), as appropriate. For those improvements not presently covered by local and regional roadway impact fee programs, it is recommended that the Project contribute its equitable fair share. Payment of the Project's equitable fair share in addition to the local and regional impact fee programs would satisfy the Project's traffic mitigation measures.

This study does not provide construction costs for the recommended mitigation measures; therefore, if the recommended mitigation measures are implemented, it is recommended that the developer work with the City of Fresno to develop the estimated construction cost.

Table XVI: Project's Fair Share of Future Roadway Improvements

ID	*Intersection*	*Existing Traffic Volumes (PM Peak)*	*Cumulative Year 2035 plus Project Traffic Volumes (PM Peak)*	*2035 Project Only Trips (PM Peak)*	*Project's Fair Share (%)*
1	Grantland Avenue / Ashlan Avenue	514	3,133	63	2.41%
2	Bryan Avenue / Ashlan Avenue	354	1,240	9	1.02%
3	Grantland Avenue / Dakota Avenue	300	2,503	125	5.67%
4	Bryan Avenue / Dakota Avenue	90	1,141	46	4.38%
6	Grantland Avenue / Shields Avenue	428	2,553	63	2.96%
7	Grantland Avenue / Clinton Avenue	265	1,607	54	4.02%
ID	***Grantland Avenue between:***	*Existing Traffic Volumes (Daily)*	*Cumulative Year 2035 plus Project Traffic Volumes (Daily)*	*2035 Project Only Trips (Daily)*	*Project's Fair Share (%)*
1	Ashlan Avenue and Dakota Avenue	3,093	25,006	596	2.72%
2	Dakota Avenue and Shields Avenue	3,093	22,800	330	1.67%
3	Shields Avenue and Clinton Avenue	2,213	17,719	219	1.41%

Note: Project Fair Share = ((2035 Project Only Trips) / (Cumulative Year 2035 + Project Traffic Volumes - Existing Traffic Volumes)) x 100

Conclusions and Recommendations

Conclusions and recommendations regarding the proposed Project are presented below.

Existing Traffic Conditions

- At present, the intersection of Bryan Avenue and Ashlan Avenue exceeds its LOS threshold during the AM peak period. To improve the LOS at this intersection, it is recommended that the following recommendations be implemented.
  - Bryan Avenue and Ashlan Avenue
    - Modify the westbound through-right lane to a through lane; and
    - Add a westbound right-turn lane.
- At present, all study segments operate at an acceptable LOS.

Existing plus Project Traffic Conditions

- A review of the Project driveways to be constructed indicates that they are located at points the minimize traffic operational impacts to the existing roadway network.
- It is recommended that access to the Project Driveway maintain a minimum throat depth of 50 feet before any vehicular openings to the north.
- It is recommended that the Project implement Class II bike lanes along its frontages to Grantland Avenue and Dakota Avenue, and a Class I Bike Path on its frontage to Grantland Avenue.
- To promote alternative modes of transportation to Harvest Elementary School, it is recommended that the Central Unified School District work with the City of Fresno and County of Fresno to implement a Safe Routes to School plan and to seek grant funding to help build bikeways and walkways where they are lacking within the one-mile radius of the existing school site.
- To promote alternative modes of transportation to Glacier Point Middle School and Central High School (East Campus), it is recommended that the Central Unified School District work with the City of Fresno and County of Fresno to implement a Safe Routes to School plan and to seek grant funding to help build bikeways and walkways where they are lacking within the two-mile radius of the existing school site.
- At buildout, the proposed Project is estimated to generate a maximum of 1,699 daily trips, 133 AM peak hour trips and 178 PM peak hour trips.
- Under this scenario, the intersection of Bryan Avenue and Ashlan Avenue is projected to exceed its LOS threshold during the AM peak period. To improve the LOS at this intersection, it is recommended that the following recommendations be implemented.
  - Bryan Avenue and Ashlan Avenue
    - Modify the westbound through-right lane to a through lane;
    - Add a westbound right-turn lane; and
    - Modify the intersection to accommodate the added lane.
- Under this scenario, all study segments are projected to operate at an acceptable LOS.

Near Term plus Project Traffic Conditions

- The total trip generation for the near term projects is 53,404 daily trips, 4,071 AM peak hour trips and 5,164 PM peak hour trips.
- Under this scenario, the intersection of Bryan Avenue and Ashlan Avenue is projected to exceed its LOS threshold during the AM peak period. To improve the LOS at this intersection, it is recommended that this intersection be signalized with protective left-turn phasing in all directions.
- Under this scenario, all study segments are projected to operate at an acceptable LOS.

Cumulative Year 2035 No Project Traffic Conditions

- Under this scenario, the intersections of Grantland Avenue and Ashlan Avenue, Bryan Avenue and Ashlan Avenue, Grantland Avenue and Dakota Avenue, Bryan Avenue and Dakota Avenue, Grantland Avenue and Shields Avenue, and Grantland Avenue and Clinton Avenue are projected to exceed their LOS threshold during one or both peak periods. To improve the LOS at the intersections projected to exceed their LOS threshold, it is recommended that the following improvements be implemented.
  - Grantland Avenue and Ashlan Avenue
    - Modify the northbound through-right lane to a right-turn lane;
    - Add a second southbound left-turn lane with a receiving lane east of Grantland Avenue;
    - Add a second southbound through lane with a receiving lane south of Ashlan Avenue;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the added lanes.
  - Bryan Avenue and Ashlan Avenue
    - Modify the eastbound through-right lane to a through lane;
    - Add an eastbound right-turn lane;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the added lane.
  - Grantland Avenue and Dakota Avenue
    - Modify the northbound right-turn lane to a through-right lane with a receiving lane north of Dakota Avenue;
    - Add a second southbound through lane with a receiving lane south of Dakota Avenue; and
    - Modify the intersection to accommodate the added lanes.
  - Bryan Avenue and Dakota Avenue
    - Add an eastbound left-turn lane;
    - Modify the eastbound left-through-right lane to a through-right lane;
    - Add a westbound left-turn lane;
    - Modify the westbound left-through-right lane to a through-right lane;
    - Add a northbound left-turn lane;
    - Modify the northbound left-through-right lane to a through-right lane;
    - Add a southbound left-turn lane;
    - Modify the southbound left-through-right lane to a through-right lane;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the added lanes.

- Grantland Avenue and Shields Avenue
  - Add an eastbound left-turn lane;
  - Modify the eastbound left-through-right lane to a through-right lane;
  - Add a westbound left-turn lane;
  - Modify the westbound left-through-right lane to a through lane;
  - Add a westbound right-turn lane;
  - Add a northbound left-turn lane;
  - Modify the northbound left-through-right lane to a through lane;
  - Add a northbound through-right lane with a receiving lane north of Shields Avenue;
  - Add a southbound left-turn lane;
  - Modify the southbound left-through-right lane to a through lane;
  - Add a second southbound through lane with a receiving lane south of Shields Avenue;
  - Add a southbound right-turn lane;
  - Signalize the intersection with protective left-turn phasing in all directions; and
  - Modify the intersection to accommodate the added lanes.
- Grantland Avenue and Clinton Avenue
  - Add a westbound left-turn lane; and
  - Modify the intersection to accommodate the added lane.

- Under this scenario, the segments of Grantland Avenue between Ashlan Avenue and Clinton Avenue are projected to operate at an unacceptable LOS. To improve the LOS of these segments, it is recommended that Grantland Avenue be modified to accommodate two lanes in each direction.

Cumulative Year 2035 plus Project Traffic Conditions

- Under this scenario, the intersections of Grantland Avenue and Ashlan Avenue, Bryan Avenue and Ashlan Avenue, Grantland Avenue and Dakota Avenue, Bryan Avenue and Dakota Avenue, Grantland Avenue and Shields Avenue, and Grantland Avenue and Clinton Avenue are projected to exceed their LOS threshold during one or both peak periods. To improve the LOS at the intersections projected to exceed their LOS threshold, it is recommended that the following improvements be implemented.
  - Grantland Avenue and Ashlan Avenue
    - Modify the northbound through-right lane to a right-turn lane;
    - Add a second southbound left-turn lane with a receiving lane east of Grantland Avenue;
    - Modify the southbound through-right lane to a through lane;
    - Add a second southbound through lane with a receiving lane south of Ashlan Avenue;
    - Add a southbound right-turn lane;
    - Implement overlap phasing of the southbound right-turn with the eastbound left-turn phase;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the added lanes.
  - Bryan Avenue and Ashlan Avenue
    - Modify the eastbound through-right lane to a through lane;
    - Add an eastbound right-turn lane;
    - Signalize the intersection with protective left-turn phasing in all directions; and
    - Modify the intersection to accommodate the added lane.

- Grantland Avenue and Dakota Avenue
  - Modify the northbound right-turn lane to a through-right lane with a receiving lane north of Dakota Avenue;
  - Add a second southbound through lane with a receiving lane south of Dakota Avenue; and
  - Modify the intersection to accommodate the added lanes.
- Bryan Avenue and Dakota Avenue
  - Add an eastbound left-turn lane;
  - Modify the eastbound left-through-right lane to a through-right lane;
  - Add a westbound left-turn lane;
  - Modify the westbound left-through-right lane to a through-right lane;
  - Add a northbound left-turn lane;
  - Modify the northbound left-through-right lane to a through-right lane;
  - Add a southbound left-turn lane;
  - Modify the southbound left-through-right lane to a through-right lane;
  - Signalize the intersection with protective left-turn phasing in all directions; and
  - Modify the intersection to accommodate the added lanes.
- Grantland Avenue and Shields Avenue
  - Add an eastbound left-turn lane;
  - Modify the eastbound left-through-right lane to a through-right lane;
  - Add a westbound left-turn lane;
  - Modify the westbound left-through-right lane to a through lane;
  - Add a westbound right-turn lane;
  - Add a northbound left-turn lane;
  - Modify the northbound left-through-right lane to a through lane;
  - Add a northbound through-right lane with a receiving lane north of Shields Avenue;
  - Add a southbound left-turn lane;
  - Modify the southbound left-through-right lane to a through lane;
  - Add a second southbound through lane with a receiving lane south of Shields Avenue;
  - Add a southbound right-turn lane;
  - Signalize the intersection with protective left-turn phasing in all directions; and
  - Modify the intersection to accommodate the added lanes.
- Grantland Avenue and Clinton Avenue
  - Add a westbound left-turn lane; and
  - Modify the intersection to accommodate the added lane.

- Under this scenario, the segments of Grantland Avenue between Ashlan Avenue and Clinton Avenue are projected to operate at an unacceptable LOS. To improve the LOS of these segments, it is recommended that Grantland Avenue be modified to accommodate two lanes in each direction.

Queuing Analysis

- It is recommended that the City consider left- and right-turn lane storage lengths as indicated in the Queuing Analysis.

Project's Equitable Fair Share

- It is recommended that the Project contribute its equitable Fair Share as presented in Table XVI.

Study Participants

JLB Traffic Engineering, Inc. Personnel:

Jose Luis Benavides, PE, TE	Project Manager
Susana Maciel, EIT	Engineer I/II
Javier Rios	Engineer I/II
Jove Alcazar	Engineer I/II

Persons Consulted:

Jeff Roberts	Granville Homes, Affiliate
Jill Gormley, PE	City of Fresno
Harpreet Kooner	County of Fresno
Tong Xiong	County of Fresno
David Padilla	Caltrans
Kai Han, TE	Fresno COG
Lang Yu	Fresno COG

References

1. City of Fresno, *2035 General Plan*.
2. County of Fresno, *2000 General Plan*.
3. *Guide for the Preparation of Traffic Impact Studies*, Caltrans, dated December 2002.
4. *Trip Generation,* 10th Edition, Washington D.C., Institute of Transportation Engineers, 2017.
5. *2014 California Manual on Uniform Traffic Control Devices*, Caltrans, November 7, 2014.

Appendix A: Scope of Work

January 29, 2018

Mrs. Jill Gormley, P.E.
Traffic Engineer
City of Fresno
2600 Fresno Street
Fresno, CA 93721-3616

Via Email Only: Jill.Gormley@fresno.gov

Subject: ***Draft Scope of Work for the Preparation of a Traffic Impact Analysis for a Single-Family Subdivision Located on the Southeast Corner of Dakota Avenue and Grantland Avenue in the City of Fresno (JLB Project 004-055)***

Dear Mrs. Gormley,

JLB Traffic Engineering, Inc. (JLB) hereby submits this Draft Scope of Work for the preparation of a Traffic Impact Analysis (TIA) for the Project described below. The Project proposes to build a 180-unit single-family subdivision on 30.00 acres on the southeast corner of Dakota Avenue and Grantland Avenue in the City of Fresno. Based on information provided to JLB, the Project will undergo a General Plan Amendment to modify the land use intended for High Density Residential (10.00 acres) to allow Medium Density Residential altogether (30.00 acres). An aerial of the Project vicinity is shown in Exhibit A.

The purpose of this TIA is to evaluate the potential on- and off-site traffic impacts, identify short-term roadway and circulation needs, determine potential mitigation measures and identify any critical traffic issues that should be addressed in the on-going planning process. To evaluate the on- and off-site traffic impacts of the proposed Project, JLB proposes the following Draft Scope of Work.

Scope of Work

- Request a Fresno Council of Governments (Fresno COG) traffic forecast model run for the project (Select Zone Analysis) which will include the project and the streets to be analyzed. The Fresno COG traffic forecasting model will be used to forecast traffic volumes for the Base Year and Cumulative Year 2035 plus Project scenarios.
- JLB will obtain recent or schedule and conduct new traffic counts at the study facility(ies) as necessary.
- JLB will perform a site visit to observe existing traffic conditions, especially during the AM and PM peak hours. Existing roadway conditions including intersection geometrics and traffic controls will be verified.
- JLB will conduct a qualitative safe routes to school evaluation from the Project site to the K-12 school(s) which would most likely serve the Project on opening day.
- JLB will qualitatively analyze existing and planned transit routes in the vicinity of the Project.
- JLB will qualitatively analyze existing and planned bikeways in the vicinity of the Project.

- JLB will forecast trip distribution based on turn count information, school boundaries and knowledge of the existing and planned circulation network in the vicinity of the Project.
- JLB will evaluate existing and forecasted levels of service (LOS) at the study intersection(s). JLB will use HCM 2010 methodologies within Synchro to perform this analysis for the AM and PM peak hours. JLB will identify the causes of poor LOS.
- JLB will evaluate on-site circulation and provide recommendations as necessary to improve circulation to and within the Project site.
- JLB will prepare California Manual on Uniform Traffic Control Devices (CA MUTCD) peak hour signal warrants for unsignalized study intersections.

Study Scenarios:

1. Existing Traffic Conditions with proposed improvement measures (if any)
2. Existing plus Project Traffic Conditions with proposed mitigation measures (if any)
3. Near Term (include pending and approved projects) plus Project Traffic Conditions with proposed mitigation measures (if any)
4. Cumulative Year 2035 No Project Traffic Conditions with proposed improvement measures (if any)
5. Cumulative Year 2035 plus Project Traffic Conditions with proposed mitigation measures (if any)

Weekday peak hours to be analyzed:

1. 7 - 9 AM peak hour
2. 4 - 6 PM peak hour

Study Intersections:

1. Grantland Avenue / Ashlan Avenue
2. Grantland Avenue / Dakota Avenue (future intersection)
3. Grantland Avenue / Shields Avenue
4. Grantland Avenue / Clinton Avenue

Queuing analysis is included in the proposed scope of work for the study intersection(s) listed above under all study scenarios. This analysis will be utilized to recommend minimum storage lengths for left- and right-turn lanes at all study intersections.

Study Segments:

1. Grantland Avenue between:
   a. Ashlan Avenue and Dakota Avenue alignment
   b. Dakota Avenue alignment and Shields Avenue
   c. Shields Avenue and Clinton Avenue

Project Only Trip Assignment to State Facilities:

1. State Route 99 / Veterans Boulevard
2. State Route 99 / Ashlan Avenue
3. State Route 99 / Clinton Avenue

Project Only Trip Generation

The trip generation rates for the Proposed Project and Existing General Plan Land Use designations were obtained form the 10th Edition of the Trip Generation Manual published by the Institute of Transportation Engineers (ITE). Table I presents the Proposed Project Land Use Trip Generation, while Table II presents the Existing General Plan Land Use Trip Generation. The Existing Land Use Trip Generation considers the construction of a 120-unit Single-Family Detached Housing and a 160-unit Multi-Family Housing based on the Existing General Plan Land Use zoning and density. The proposed Project is estimated to generate a maximum of 1,699 daily trips, 133 AM peak hour trips and 178 PM peak hour trips. Under the Existing General Plan, the site is anticipated to generate a maximum of 2,304 daily trips, 163 AM peak hour trips and 209 PM peak hour trips. Compared to the Existing General Plan Land Use, the proposed Project is estimated to reduce traffic generation by 605 Daily, 30 AM peak hour and 31 PM peak hour trips. The difference in trip generation is summarized in Table III.

Table I: Proposed Project Land Use Trip Generation

Land Use (ITE Code)	*Size*	*Unit*	*Daily*		*AM Peak Hour*						*PM Peak Hour*					
			Rate	*Total*	*Trip Rate*	*In %*	*Out %*	*In*	*Out*	*Total*	*Trip Rate*	*In %*	*Out %*	*In*	*Out*	*Total*
Single-Family Detached Housing (210)	180	d.u.	9.44	1,699	0.74	25	75	33	100	133	0.99	63	37	112	66	178
Total Project Trips				**1,699**				**33**	**100**	**133**				**112**	**66**	**178**

Note: d.u. = Dwelling Units

Table II: Existing General Plan Land Use Trip Generation

Land Use (ITE Code)	*Size*	*Unit*	*Daily*		*AM Peak Hour*						*PM Peak Hour*					
			Rate	*Total*	*Trip Rate*	*In %*	*Out %*	*In*	*Out*	*Total*	*Trip Rate*	*In %*	*Out %*	*In*	*Out*	*Total*
Single-Family Detached Housing (210)	120	d.u.	9.44	1,133	0.74	25	75	22	67	89	0.99	63	37	75	44	119
Multi-Family Housing (220)	160	d.u.	7.32	1,171	0.46	23	77	17	57	74	0.56	63	37	57	33	90
Total Project Trips				**2,304**				**39**	**124**	**163**				**132**	**77**	**209**

Note: d.u. = Dwelling Units

Table III: Difference in Trip Generation

	Daily	*AM Peak Hour*			*PM Peak Hour*		
		In	*Out*	*Total*	*In*	*Out*	*Total*
Proposed Project Land Use Trip Generation	1,699	33	100	133	112	66	178
Existing General Plan Land Use Trip Generation	2,304	39	124	163	132	77	209
Change in Trip Generation	**-605**	**-6**	**-24**	**-30**	**-20**	**-11**	**-31**

Note: d.u. = Dwelling Units

Near Term Projects to be Included

Based on our local knowledge of the study area, consultation with City of Fresno Planning & Development staff, JLB proposes to include projects in the vicinity of the proposed Project under the Near Term plus Project Analysis. The projects proposed to be included in the Near Term Scenario are:

	Project Name	General Location
1.	Westlake (portion of)	SW Ashlan Avenue and Grantland Avenue
2.	TT 5493 (portion of)	SE Shaw Avenue and Bryan Avenue
3.	TT 5538 (portion of)	SE Ashlan Avenue and Hayes Avenue
4.	TT 5597 (portion of)	NE of Barstow Avenue and Garfield Avenue
5.	TT 5600 (portion of)	SW Barstow Avenue and Grantland Avenue
6.	TT 5652 (portion of)	SE Bryan Avenue and Ashlan Avenue
7.	Koligian Educational Center (portion of)	NE Ashlan Avenue and Grantland Avenue
8.	TT 5864 (portion of)	NW Gettysburg Avenue and Grantland Avenue
9.	TT 5891 (portion of)	NW Ashlan Avenue and Hayes Avenue
10.	TT 6056	SE Bryan Avenue and Gettysburg Avenue
11.	El Paseo (portion of)	SE Herndon Avenue and Golden State
12.	Jack in the Box	SW Shaw Avenue and Barcus Avenue
13.	Commercial Development	NW Herndon Avenue and Van Buren Avenue
14.	Commercial Development	SE Herndon Avenue and Riverside Drive
15.	Multi-Family Residential	SE Herndon Avenue and Riverside Drive
16.	Residential Development	Clinton Avenue between Bryan Avenue and Hayes Avenue

Other Near Term Projects the City, County or Caltrans has knowledge and for which it is anticipated that said project(s) is/are projected to be whole or partially built by the Near Term Project Year 2020. City, County and Caltrans as appropriate would provide JLB with project details such as a project description, location, proposed land uses with breakdowns and type of residential units and amount of square footages for non-residential uses.

The above scope of work is based on our understanding of this Project and our experience with similar Traffic Impact Analysis Projects. In the absence of comments by February 19, 2018, it will be assumed that the above scope of work is acceptable to the agency(ies) that have not submitted any comments to the proposed TIA Scope of Work.

If you have any questions or require additional information, please contact me by phone at (559) 570-8991 or by e-mail at smaciel@JLBtraffic.com.

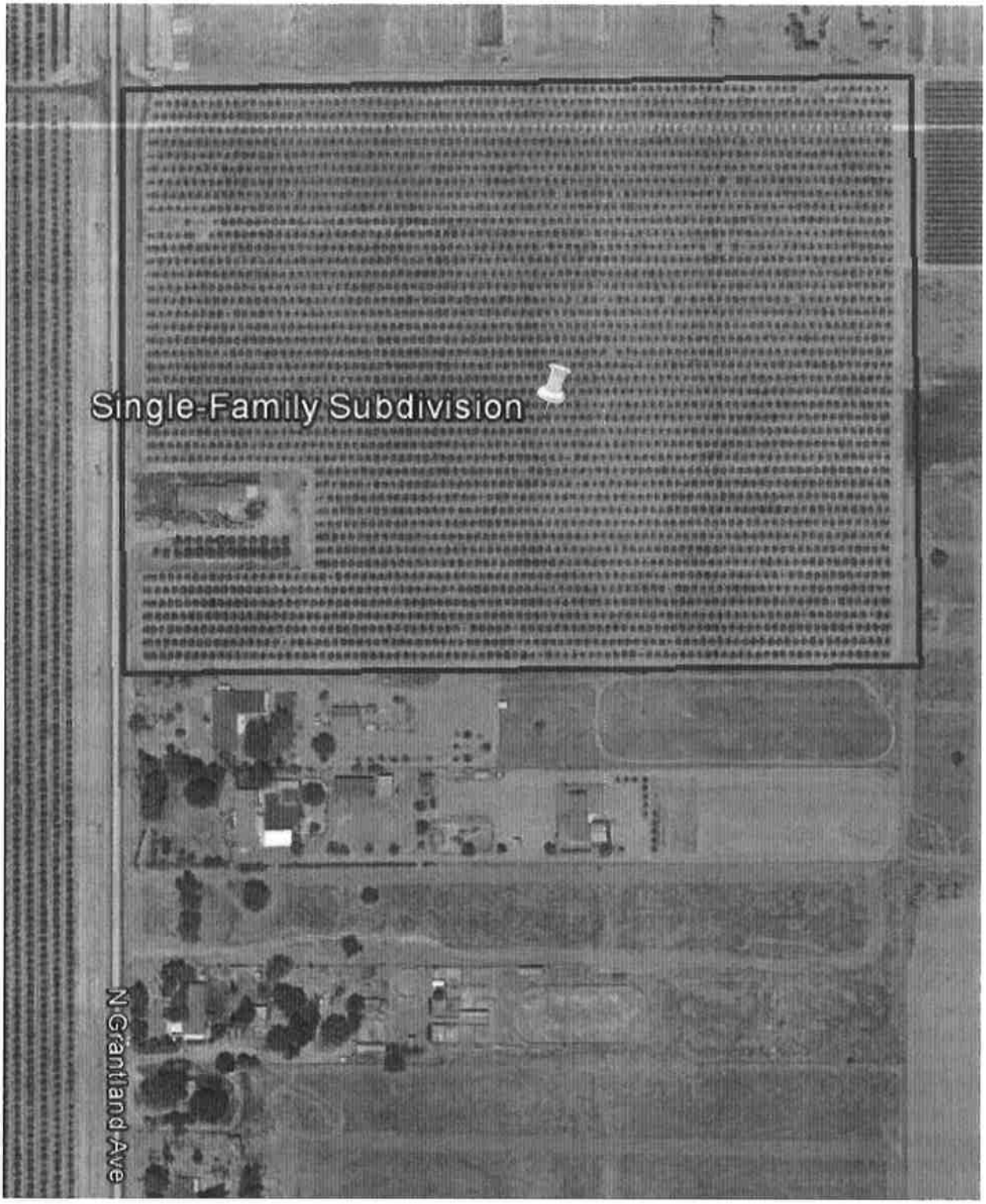
Sincerely,

Susana Maciel

Susana Maciel, EIT
Engineer I/II

cc: Harpreet Kooner, County of Fresno
Tong Xiong, County of Fresno
David Padilla, Caltrans
Jose Luis Benavides, JLB Traffic Engineering, Inc.

Exhibit A – Aerial



Susana Maciel

From: Jill Gormley <Jill.Gormley@fresno.gov>
Sent: Tuesday, February 13, 2018 12:33 PM
To: Susana Maciel
Cc: hkooner (HKooner@co.fresno.ca.us); Tong Xiong (tonxiong@co.fresno.ca.us); David Padilla (dave_padilla@dot.ca.gov); Jose Benavides
Subject: RE: Single-Family Subdivision (Dakota Avenue and Grantland Avenue) TIA - Draft Scope of Work

Hi Susana,

Please add the intersections of Ashlan at Bryan and Dakota at Bryan to the scope of work. Also, please prepare traffic signal Warrant 1 (8-hour) and Warrant 2 (4-hour) for the proposed study intersections (existing conditions only). Include the warrants and the results in the study.

Please let me know if you have any questions.

Jill Gormley, TE
City Traffic Engineer / Traffic Operations & Planning Manager
City of Fresno, Public Works Department
2600 Fresno Street, 4th Floor
Fresno, CA 93721-3623
www.fresno.gov/publicworks/traffic-engineering

P: 559/621-8792
F: 559/457-1107

From: Susana Maciel [mailto:smaciel@jlbtraffic.com]
Sent: Monday, January 29, 2018 3:22 PM
To: Jill Gormley
Cc: hkooner (HKooner@co.fresno.ca.us); Tong Xiong (tonxiong@co.fresno.ca.us); David Padilla (dave_padilla@dot.ca.gov); Jose Benavides
Subject: Single-Family Subdivision (Dakota Avenue and Grantland Avenue) TIA - Draft Scope of Work

Good afternoon Mrs. Gormley,

Attached you will find a Draft Scope of Work for the preparation of a Traffic Impact Analysis for a Project in the City of Fresno.

I kindly ask that you take a moment to review and comment on the proposed Scope of Work. In the absence of comments by February 19, 2018, it will be assumed that the proposed Scope of Work is acceptable to the agency(ies) that have not submitted any comments.

If you have any questions or require additional information, please contact me by phone at 559.570.8991 or by e-mail at smaciel@JLBtraffic.com. I appreciate your time and attention to this matter.

Best,

Susana Maciel, EIT
Engineer I/II
JLB Traffic Engineering, Inc.
1300 E. Shaw Ave., Ste. 103
Fresno, CA 93710
Office: 559.570.8991
Cell: 559.232.9474
E-mail: SMaciel@JLBtraffic.com
Web: www.JLBtraffic.com

Jose Benavides

From: Padilla, Dave@DOT <dave.padilla@dot.ca.gov>
Sent: Thursday, February 15, 2018 10:47 AM
To: Susana Maciel; Jill Gormley (Jill.Gormley@fresno.gov)
Cc: hkooner (HKooner@co.fresno.ca.us); Tong Xiong (tonxiong@co.fresno.ca.us); Jose Benavides
Subject: RE: Single-Family Subdivision (Dakota Avenue and Grantland Avenue) TIA - Draft Scope of Work

Hello Susana,

We have no concerns with the proposed SOW.

Thank you

David Padilla, Associate Transportation Planner
Office of Planning & Local Assistance
1352 W. Olive Avenue
Fresno, CA 93778-2616
Office: (559) 444-2493, Fax: (559) 445-5875
District 6

From: Susana Maciel [mailto:smaciel@jlbtraffic.com]
Sent: Friday, February 09, 2018 3:09 PM
To: Jill Gormley (Jill.Gormley@fresno.gov) <Jill.Gormley@fresno.gov>
Cc: hkooner (HKooner@co.fresno.ca.us) <HKooner@co.fresno.ca.us>; Tong Xiong (tonxiong@co.fresno.ca.us) <tonxiong@co.fresno.ca.us>; Padilla, Dave@DOT <dave.padilla@dot.ca.gov>; Jose Benavides <jbenavides@jlbtraffic.com>
Subject: RE: Single-Family Subdivision (Dakota Avenue and Grantland Avenue) TIA - Draft Scope of Work

Good afternoon,

I just wanted to reach out to see if you all had a moment to review the proposed Scope of Work for this Project and to help answer any questions you may have.

Please do not hesitate to reach out to me should you have any questions or require any additional information. You can find my contact information below.

I look forward to hearing from you all soon.

Best,

Susana Maciel, EIT
Engineer I/II
JLB Traffic Engineering, Inc.
1300 E. Shaw Ave., Ste. 103
Fresno, CA 93710
Office: 559.570.8991
Cell: 559.232.9474
E-mail: SMaciel@JLBtraffic.com
Web: www.JLBtraffic.com

From: Susana Maciel
Sent: Monday, January 29, 2018 3:22 PM
To: Jill Gormley (Jill.Gormley@fresno.gov) <Jill.Gormley@fresno.gov>
Cc: hkooner (HKooner@co.fresno.ca.us) <HKooner@co.fresno.ca.us>; Tong Xiong (tonxiong@co.fresno.ca.us) <tonxiong@co.fresno.ca.us>; David Padilla (dave_padilla@dot.ca.gov) <dave_padilla@dot.ca.gov>; Jose Benavides <jbenavides@jlbtraffic.com>
Subject: Single-Family Subdivision (Dakota Avenue and Grantland Avenue) TIA - Draft Scope of Work

Good afternoon Mrs. Gormley,

Attached you will find a Draft Scope of Work for the preparation of a Traffic Impact Analysis for a Project in the City of Fresno.

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If you have any questions or require additional information, please contact me by phone at 559.570.8991 or by e-mail at smaciel@JLBtraffic.com. I appreciate your time and attention to this matter.

Best,

Susana Maciel, EIT
Engineer I/II
JLB Traffic Engineering, Inc.
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Fresno, CA 93710
Office: 559.570.8991
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Web: www.JLBtraffic.com

Jose Benavides

From: Xiong, Tong (PWP) <tonxiong@co.fresno.ca.us>
Sent: Friday, February 16, 2018 11:17 AM
To: Susana Maciel
Cc: Kooner, Harpreet; David Padilla (dave_padilla@dot.ca.gov); Jose Benavides; Jill Gormley (Jill.Gormley@fresno.gov); Daniele, Frank
Subject: RE: Single-Family Subdivision (Dakota Avenue and Grantland Avenue) TIA - Draft Scope of Work

Susan,

Thanks for giving Fresno County Transportation Planning the opportunity to review the draft scope of work for a proposed 180 single-family dwelling unit subdivision project located at the southeast corner of Grantland Avenue and Dakota Alignment. We generally are in agreement with the scope of work. Below is our comments.

We are also in concurrence with the City of Fresno's request to include the intersections listed below into study analysis.

1. Intersection of Ashlan Avenue and Bryan Avenue
2. Intersection of Dakota Avenue and Bryan Avenue.

Please note, a trip distribution was not included in the scoping document. Fresno County Transportation Planning request one be routed to the County for review. Additional roadway segment or intersection may be requested to be included in the study if deemed necessary once we receive the trip distribution for review.

Regards,

Tong Xiong

Design Division
Department of Public Works and Planning
2220 Tulare Street, 7th Floor
Fresno, CA 93721
Tel: (559) 600-4532
E-mail: tonxiong@co.fresno.ca.us

From: Susana Maciel [mailto:smaciel@jlbtraffic.com]
Sent: Monday, January 29, 2018 3:22 PM
To: Jill Gormley (Jill.Gormley@fresno.gov)
Cc: Kooner, Harpreet ; Xiong, Tong (PWP) ; David Padilla (dave_padilla@dot.ca.gov) ; Jose Benavides
Subject: Single-Family Subdivision (Dakota Avenue and Grantland Avenue) TIA - Draft Scope of Work

Good afternoon Mrs. Gormley,

Attached you will find a Draft Scope of Work for the preparation of a Traffic Impact Analysis for a Project in the City of Fresno.

I kindly ask that you take a moment to review and comment on the proposed Scope of Work. In the absence of comments by February 19, 2018, it will be assumed that the proposed Scope of Work is acceptable to the agency(ies) that have not submitted any comments.

If you have any questions or require additional information, please contact me by phone at 559.570.8991 or by e-mail at smaciel@JLBtraffic.com. I appreciate your time and attention to this matter.

Best,

Susana Maciel, EIT
Engineer I/II
JLB Traffic Engineering, Inc.
1300 E. Shaw Ave., Ste. 103
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Appendix B: Traffic Counts

JLB Traffic Engineering, Inc.

1300 E. Shaw Ave., Ste. 103
Fresno, CA 93710
(559) 570-8991
Traffic Engineering, Transportation Planning & Parking Solutions
www.JLBtraffic.com

File Name : 01 Grantland Avenue at Ashlan Avenue
Site Code : 00000000
Start Date : 3/6/2018
Page No : 1

Groups Printed- Unshifted

	GRANTLAND Southbound				ASHLAN Westbound				GRANTLAND Northbound				
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	51	19	0	70	14	10	0	24	20	7	0	27	121
07:15 AM	10	27	0	37	31	30	0	61	24	8	0	32	130
07:30 AM	5	36	0	41	29	17	0	46	24	12	0	36	123
07:45 AM	9	41	0	50	8	11	0	19	18	7	0	25	94
Total	75	123	0	198	82	68	0	150	86	34	0	120	468
08:00 AM	3	30	0	33	6	9	0	15	22	2	0	24	72
08:15 AM	3	21	0	24	6	7	0	13	17	2	0	19	56
08:30 AM	5	23	0	28	2	4	0	6	23	1	0	24	58
08:45 AM	5	18	0	23	7	3	0	10	22	3	0	25	58
Total	16	92	0	108	21	23	0	44	84	8	0	92	244
******													
04:00 PM	12	22	0	34	9	15	0	24	28	5	0	33	91
04:15 PM	18	33	0	51	5	9	0	14	23	7	0	30	95
04:30 PM	17	36	0	53	7	21	0	28	32	9	0	41	122
04:45 PM	19	44	0	63	11	17	0	28	37	10	0	47	138
Total	66	135	0	201	32	62	0	94	120	31	0	151	446
05:00 PM	18	32	0	50	9	19	0	28	43	3	0	46	124
05:15 PM	29	41	0	70	3	18	0	21	29	10	2	41	132
05:30 PM	33	41	0	74	5	8	0	13	24	9	0	33	120
05:45 PM	20	36	0	56	8	13	0	21	19	3	2	24	101
Total	100	150	0	250	25	58	0	83	115	25	4	144	477
******													
Grand Total	257	500	0	757	160	211	0	371	405	98	4	507	1635
Apprch %	33.9	66.1	0		43.1	56.9	0		79.9	19.3	0.8		
Total %	15.7	30.6	0	46.3	9.8	12.9	0	22.7	24.8	6	0.2	31	

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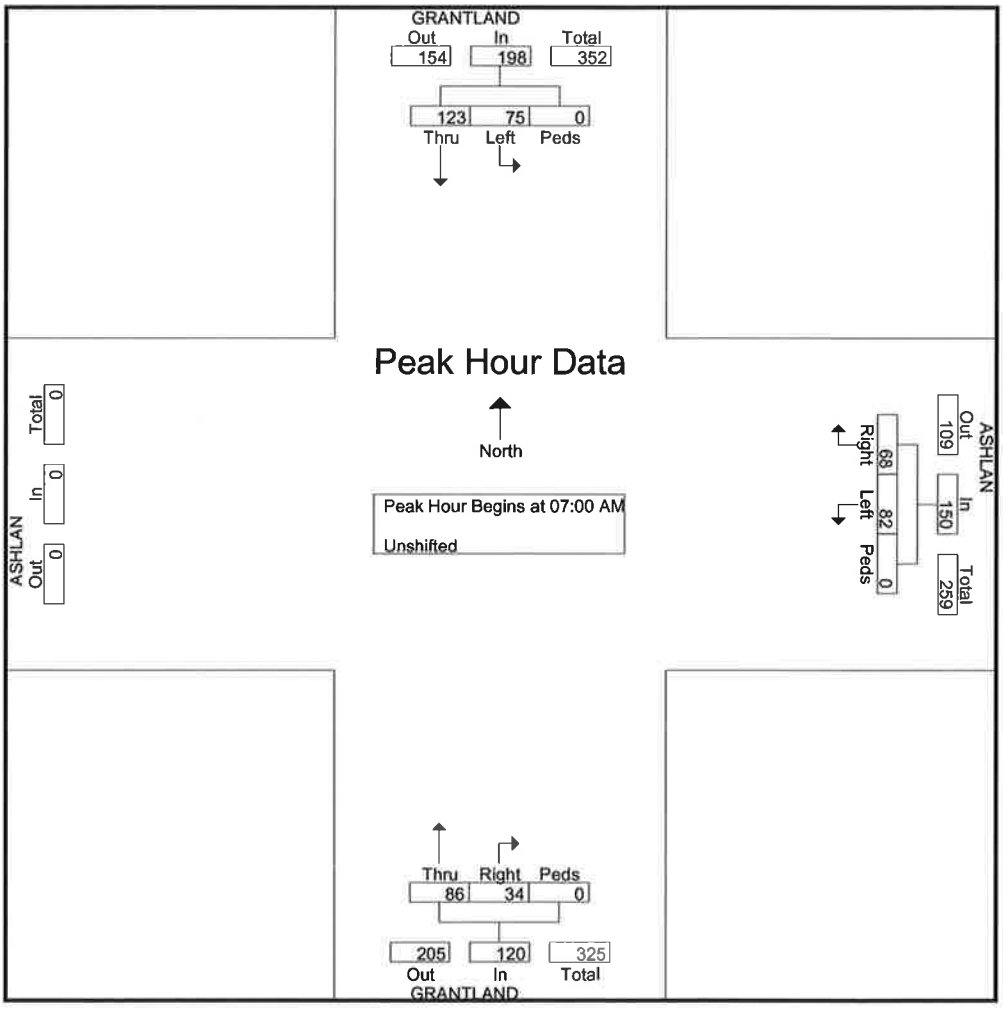
File Name : 01 Grantland Avenue at Ashlan Avenue
Site Code : 00000000
Start Date : 3/6/2018
Page No : 2

	GRANTLAND Southbound				ASHLAN Westbound				GRANTLAND Northbound				
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	**51**	19	0	**70**	14	10	0	24	20	7	0	27	121
07:15 AM	10	27	0	37	**31**	**30**	0	**61**	**24**	8	0	32	**130**
07:30 AM	5	36	0	41	29	17	0	46	24	**12**	0	**36**	123
07:45 AM	9	**41**	0	50	8	11	0	19	18	7	0	25	94
Total Volume	75	123	0	198	82	68	0	150	86	34	0	120	468
% App. Total	37.9	62.1	0		54.7	45.3	0		71.7	28.3	0		
PHF	.368	.750	.000	.707	.661	.567	.000	.615	.896	.708	.000	.833	.900



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(559) 570-8991
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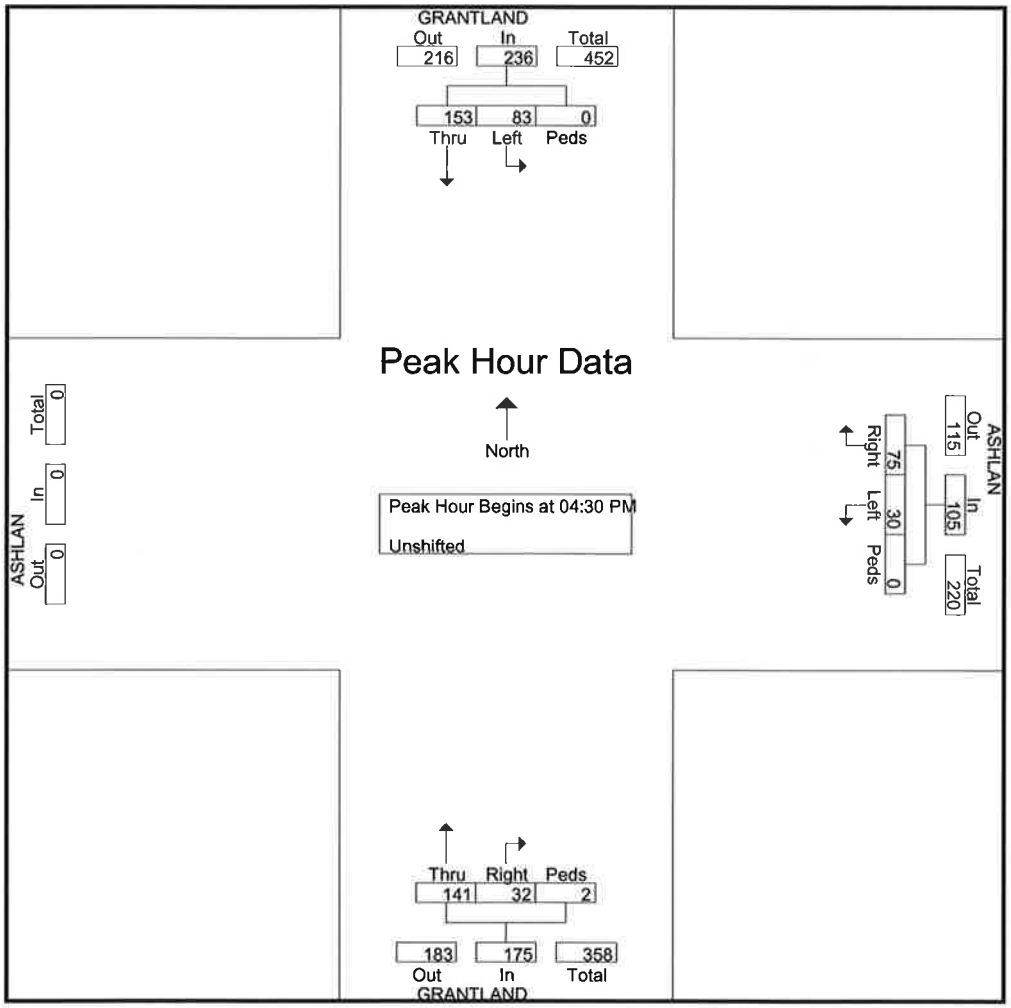
File Name : 01 Grantland Avenue at Ashlan Avenue
Site Code : 00000000
Start Date : 3/6/2018
Page No : 3

	GRANTLAND Southbound				ASHLAN Westbound				GRANTLAND Northbound				
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:00 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	17	36	0	53	7	**21**	0	**28**	32	9	0	41	122
04:45 PM	19	**44**	0	63	**11**	17	0	28	37	**10**	0	**47**	**138**
05:00 PM	18	32	0	50	9	19	0	28	**43**	3	0	46	124
05:15 PM	**29**	41	0	**70**	3	18	0	21	29	10	**2**	41	132
Total Volume	83	153	0	236	30	75	0	105	141	32	2	175	516
% App. Total	35.2	64.8	0		28.6	71.4	0		80.6	18.3	1.1		
PHF	.716	.869	.000	.843	.682	.893	.000	.938	.820	.800	.250	.931	.935



JLB Traffic Engineering, Inc.

1300 E. Shaw Ave., Ste. 103
Fresno, CA 93710
(559) 570-8991
Traffic Engineering, Transportation Planning & Parking Solutions
www.JLBtraffic.com

File Name : 02 Bryan Avenue at Ashlan Avenue
Site Code : 00000000
Start Date : 3/7/2018
Page No : 1

Groups Printed- Unshifted - Bank 1

	BRYAN Southbound					ASHLAN Westbound					BRYAN Northbound					ASHLAN Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	9	2	8	0	19	2	50	6	0	58	7	3	1	0	11	5	72	4	0	81	169
07:15 AM	3	8	18	0	29	2	93	18	0	113	34	15	0	0	49	27	72	10	0	109	300
07:30 AM	29	28	25	1	83	1	73	14	0	88	49	25	0	0	74	28	82	16	0	126	371
07:45 AM	20	10	4	0	34	3	14	38	0	55	13	6	1	0	20	8	23	8	0	39	148
Total	61	48	55	1	165	8	230	76	0	314	103	49	2	0	154	68	249	38	0	355	988
08:00 AM	53	7	11	0	71	0	12	75	1	88	4	12	4	0	20	0	7	4	1	12	191
08:15 AM	66	23	5	0	94	1	10	71	0	82	2	19	1	0	22	6	9	1	0	16	214
08:30 AM	21	6	6	0	33	3	10	8	0	21	1	2	2	0	5	1	21	3	0	25	84
08:45 AM	4	2	1	0	7	3	14	7	0	24	0	7	4	0	11	2	11	1	0	14	56
Total	144	38	23	0	205	7	46	161	1	215	7	40	11	0	58	9	48	9	1	67	545
******																					
04:00 PM	19	7	5	0	31	2	15	10	0	27	1	6	2	0	9	6	14	4	1	25	92
04:15 PM	15	7	3	0	25	4	19	12	0	35	0	6	3	0	9	0	12	2	0	14	83
04:30 PM	8	10	4	0	22	2	15	9	0	26	1	3	1	0	5	6	17	1	0	24	77
04:45 PM	14	5	5	0	24	3	18	16	0	37	1	2	2	0	5	7	15	2	0	24	90
Total	56	29	17	0	102	11	67	47	0	125	3	17	8	0	28	19	58	9	1	87	342
05:00 PM	10	4	1	0	15	3	11	10	0	24	3	10	0	0	13	1	18	1	0	20	72
05:15 PM	7	7	2	2	18	1	20	11	0	32	1	5	4	0	10	4	18	5	2	29	89
05:30 PM	22	9	2	0	33	2	16	18	0	36	1	9	2	0	12	3	16	0	0	19	100
05:45 PM	23	8	1	2	34	2	21	11	0	34	1	9	3	0	13	5	12	1	0	18	99
Total	62	28	6	4	100	8	68	50	0	126	6	33	9	0	48	13	64	7	2	86	360
Grand Total	323	143	101	5	572	34	411	334	1	780	119	139	30	0	288	109	419	63	4	595	2235
Apprch %	56.5	25	17.7	0.9		4.4	52.7	42.8	0.1		41.3	48.3	10.4	0		18.3	70.4	10.6	0.7		
Total %	14.5	6.4	4.5	0.2	25.6	1.5	18.4	14.9	0	34.9	5.3	6.2	1.3	0	12.9	4.9	18.7	2.8	0.2	26.6	
Unshifted	323	143	101	5	572	31	411	334	1	777	119	139	30	0	288	82	419	63	4	568	2205
% Unshifted																					
Bank 1	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	27	0	0	0	27	30
% Bank 1	0	0	0	0	0	8.8	0	0	0	0.4	0	0	0	0	0	24.8	0	0	0	4.5	1.3

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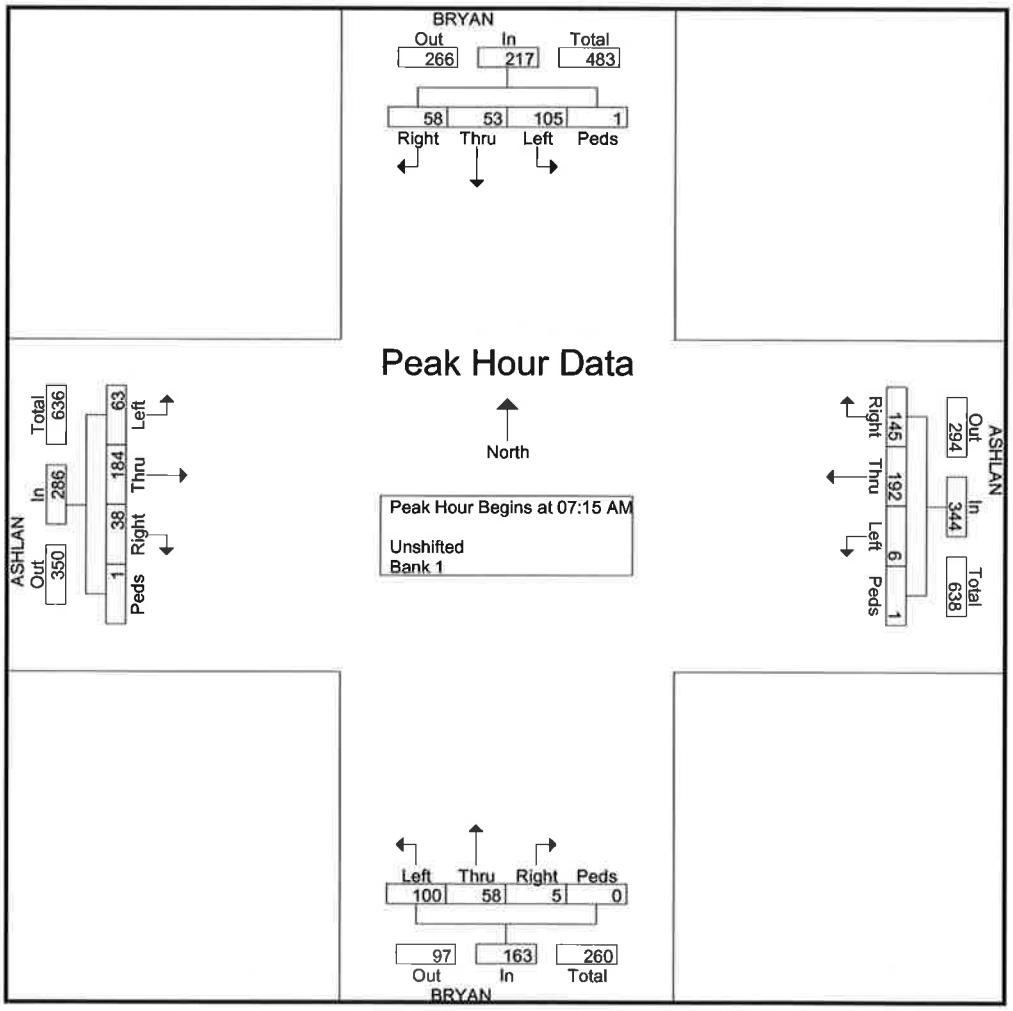
File Name : 02 Bryan Avenue at Ashlan Avenue
Site Code : 00000000
Start Date : 3/7/2018
Page No : 2

	BRYAN Southbound					ASHLAN Westbound					BRYAN Northbound					ASHLAN Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	3	8	18	0	29	2	**93**	18	0	**113**	34	15	0	0	49	27	72	10	0	109	300
07:30 AM	29	**28**	**25**	**1**	**83**	1	73	14	0	88	**49**	**25**	0	0	**74**	**28**	**82**	**16**	0	**126**	**371**
07:45 AM	20	10	4	0	34	**3**	14	38	0	55	13	6	1	0	20	8	23	8	0	39	148
08:00 AM	**53**	7	11	0	71	0	12	**75**	**1**	88	4	12	**4**	0	20	0	7	4	**1**	12	191
Total Volume	105	53	58	1	217	6	192	145	1	344	100	58	5	0	163	63	184	38	1	286	1010
% App. Total	48.4	24.4	26.7	0.5		1.7	55.8	42.2	0.3		61.3	35.6	3.1	0		22	64.3	13.3	0.3		
PHF	.495	.473	.580	.250	.654	.500	.516	.483	.250	.761	.510	.580	.313	.000	.551	.563	.561	.594	.250	.567	.681



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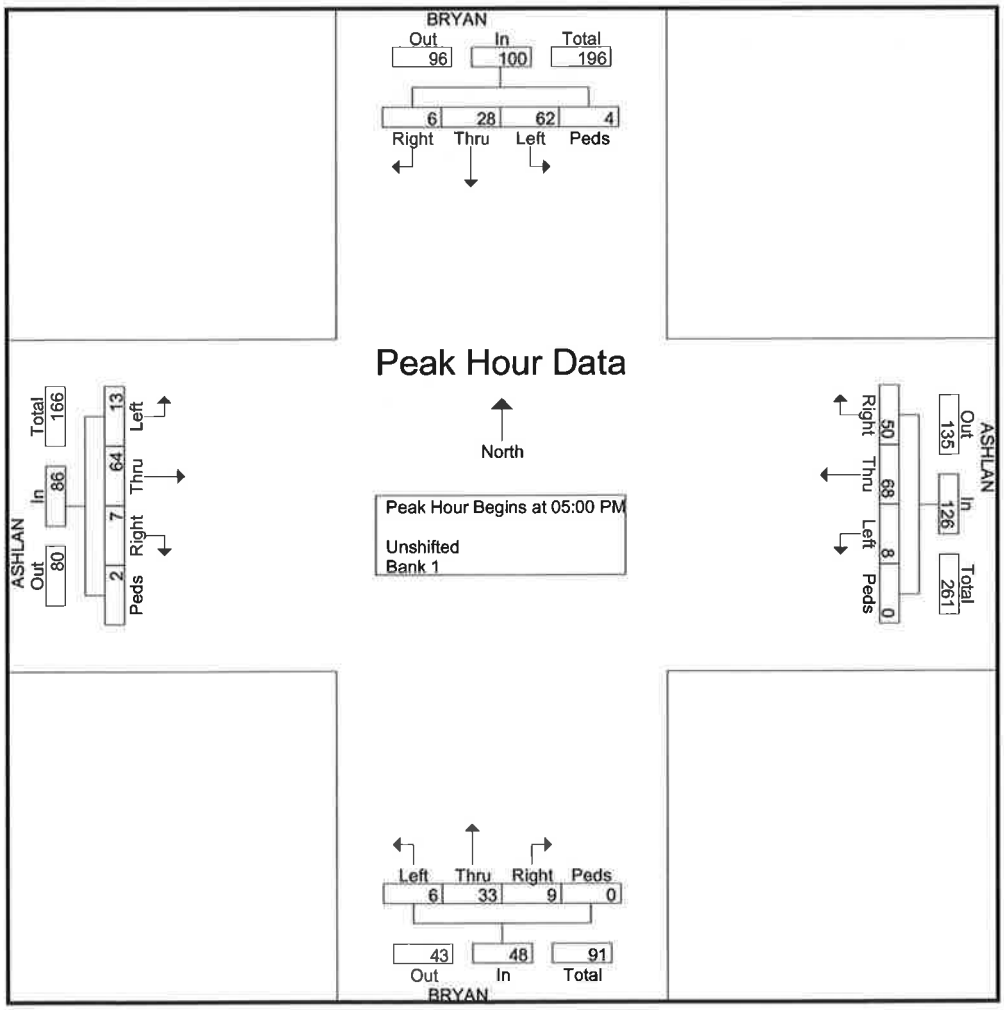
File Name : 02 Bryan Avenue at Ashlan Avenue
Site Code : 00000000
Start Date : 3/7/2018
Page No : 3

	BRYAN Southbound					ASHLAN Westbound					BRYAN Northbound					ASHLAN Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	10	4	1	0	15	**3**	11	10	0	24	**3**	**10**	0	0	**13**	1	**18**	1	0	20	72
05:15 PM	7	7	**2**	**2**	18	1	20	11	0	32	1	5	**4**	0	10	4	18	**5**	**2**	**29**	89
05:30 PM	22	**9**	2	0	33	2	16	**18**	0	**36**	1	9	2	0	12	3	16	0	0	19	**100**
05:45 PM	**23**	8	1	2	**34**	2	**21**	11	0	34	1	9	3	0	13	**5**	12	1	0	18	99
Total Volume	62	28	6	4	100	8	68	50	0	126	6	33	9	0	48	13	64	7	2	86	360
% App. Total	62	28	6	4		6.3	54	39.7	0		12.5	68.8	18.8	0		15.1	74.4	8.1	2.3		
PHF	.674	.778	.750	.500	.735	.667	.810	.694	.000	.875	.500	.825	.563	.000	.923	.650	.889	.350	.250	.741	.900



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File Name : 02 Bryan Avenue at Ashlan Avenue
Site Code : 00000000
Start Date : 3/7/2018
Page No : 1

Groups Printed- Bank 1

	BRYAN Southbound					ASHLAN Westbound					BRYAN Northbound					ASHLAN Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	10	10
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9	9
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0	0	0	23	23
******																					
08:30 AM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	1	0	0	0	1	3
******																					
Total	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	1	0	0	0	1	3
******																					
04:00 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1	2
******																					
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
******																					
Total	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2	0	0	0	2	3
******																					
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Grand Total	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	27	0	0	0	27	30
Apprch %	0	0	0	0		100	0	0	0		0	0	0	0		100	0	0	0		
Total %	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0	90	0	0	0	90	

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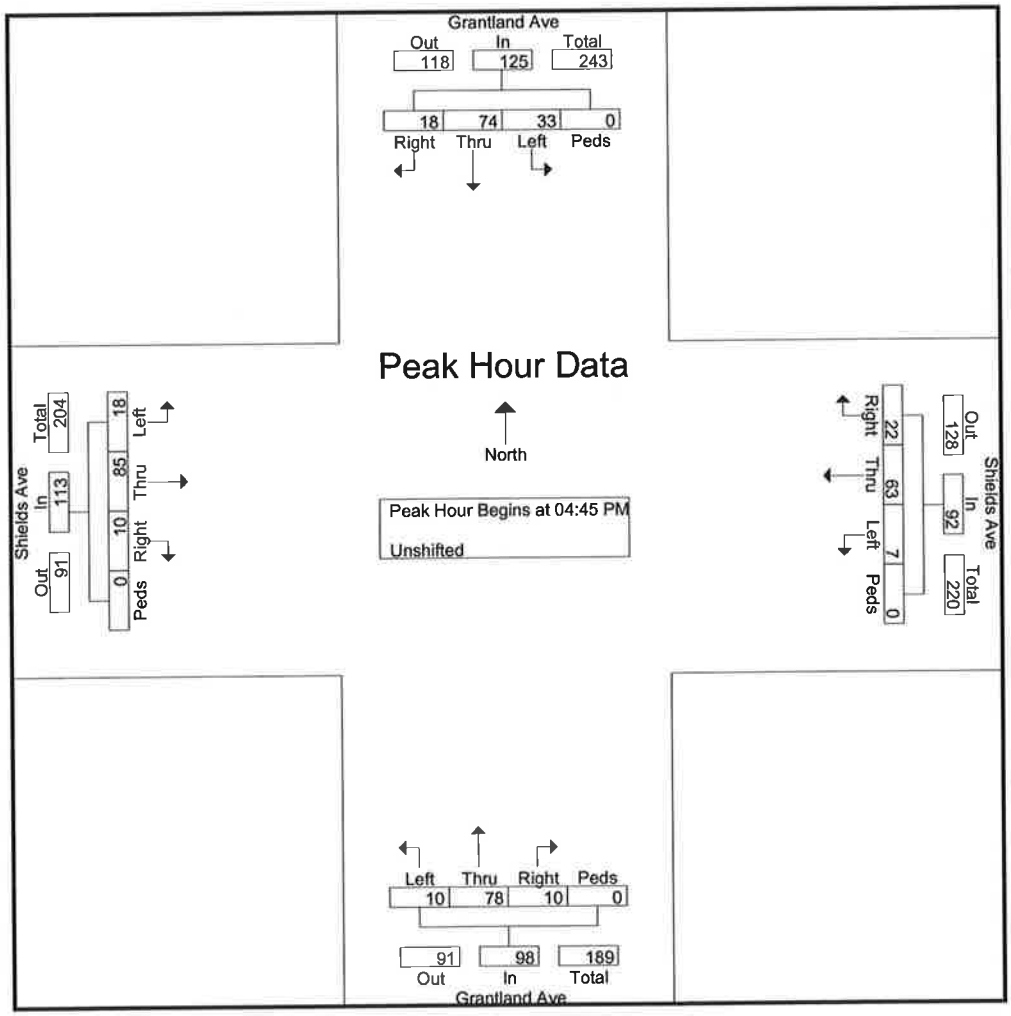
File Name : Grantland Avenue at Shields Avenue
Site Code : 00003718
Start Date : 3/7/2018
Page No : 3

	Grantland Ave Southbound					Shields Ave Westbound					Grantland Ave Northbound					Shields Ave Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	6	19	**6**	0	31	2	10	4	0	16	2	**26**	2	0	**30**	4	**24**	2	0	**30**	107
05:00 PM	9	16	4	0	29	**3**	**21**	**9**	0	**33**	**1**	17	0	0	18	**6**	23	1	0	30	110
05:15 PM	8	17	3	0	28	**1**	13	3	0	17	**4**	17	3	0	24	4	22	3	0	29	98
05:30 PM	**10**	**22**	5	0	**37**	**1**	19	6	0	26	3	18	**5**	0	26	4	16	**4**	0	24	**113**
Total Volume	33	74	18	0	125	7	63	22	0	92	10	78	10	0	98	18	85	10	0	113	428
% App. Total	26.4	59.2	14.4	0		7.6	68.5	23.9	0		10.2	79.6	10.2	0		15.9	75.2	8.8	0		
PHF	.825	.841	.750	.000	.845	.583	.750	.611	.000	.697	.625	.750	.500	.000	.817	.750	.885	.625	.000	.942	.947



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File Name : Grantland Avenue at Clinton Avenue
Site Code : 00003818
Start Date : 3/8/2018
Page No : 1

Groups Printed- Unshifted

	Grantland Ave Southbound				Clinton Ave Westbound				Grantland Ave Northbound				
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	19	0	19	0	4	0	4	15	0	0	15	38
07:15 AM	2	25	0	27	2	5	0	7	19	1	0	20	54
07:30 AM	3	43	0	46	5	2	0	7	15	0	0	15	68
07:45 AM	6	33	0	39	4	3	0	7	10	1	0	11	57
Total	11	120	0	131	11	14	0	25	59	2	0	61	217
08:00 AM	2	15	0	17	2	3	0	5	20	1	0	21	43
08:15 AM	2	14	0	16	1	3	0	4	12	0	0	12	32
08:30 AM	4	8	0	12	1	2	0	3	16	0	0	16	31
08:45 AM	0	21	0	21	2	0	0	2	12	2	0	14	37
Total	8	58	0	66	6	8	0	14	60	3	0	63	143
******													
04:00 PM	6	20	0	26	3	6	0	9	23	5	0	28	63
04:15 PM	1	25	0	26	2	4	0	6	16	0	0	16	48
04:30 PM	5	19	0	24	0	4	0	4	24	2	0	26	54
04:45 PM	4	34	0	38	2	4	0	6	20	1	0	21	65
Total	16	98	0	114	7	18	0	25	83	8	0	91	230
05:00 PM	7	30	0	37	2	2	0	4	33	1	0	34	75
05:15 PM	4	28	0	32	1	4	0	5	31	1	0	32	69
05:30 PM	2	20	0	22	1	2	0	3	29	2	0	31	56
05:45 PM	5	18	0	23	2	3	0	5	13	1	0	14	42
Total	18	96	0	114	6	11	0	17	106	5	0	111	242
Grand Total	53	372	0	425	30	51	0	81	308	18	0	326	832
Apprch %	12.5	87.5	0		37	63	0		94.5	5.5	0		
Total %	6.4	44.7	0	51.1	3.6	6.1	0	9.7	37	2.2	0	39.2	

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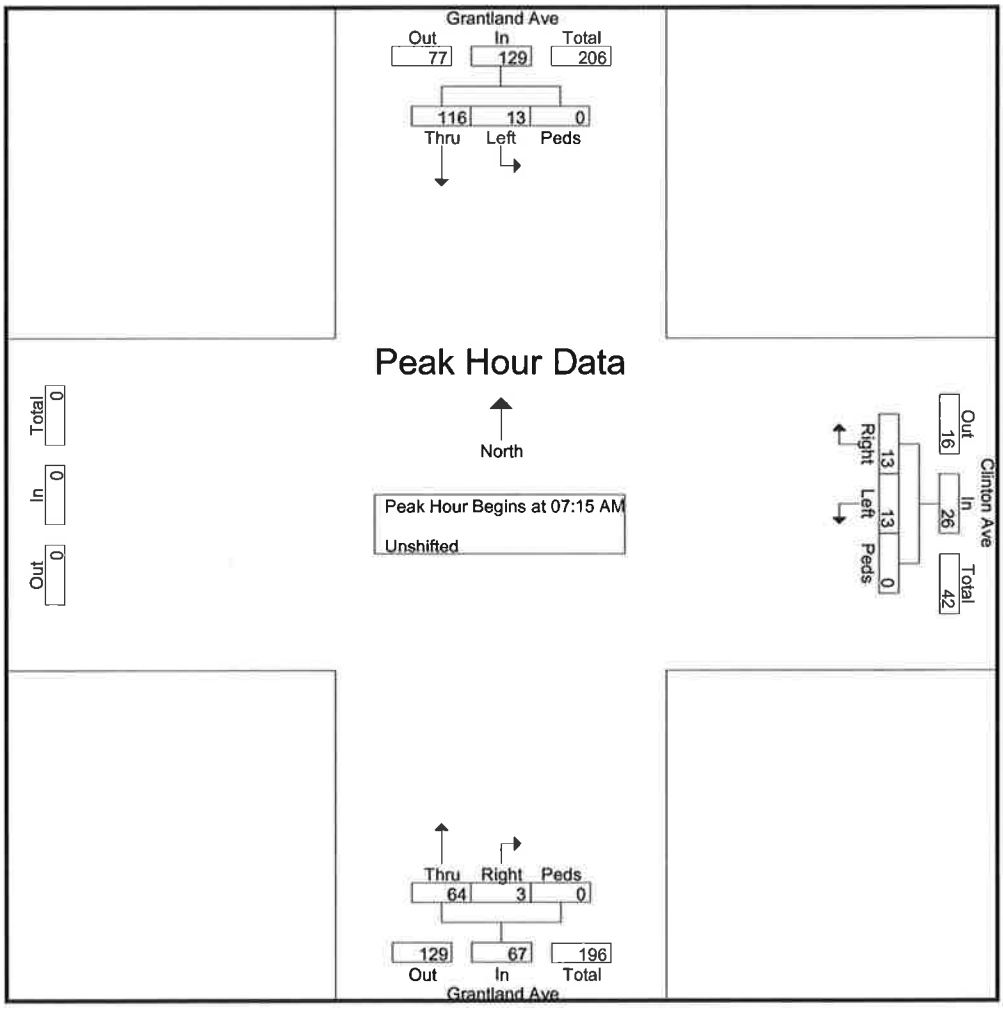
File Name : Grantland Avenue at Clinton Avenue
Site Code : 00003818
Start Date : 3/8/2018
Page No : 2

	Grantland Ave Southbound				Clinton Ave Westbound				Grantland Ave Northbound				
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	2	25	0	27	2	**5**	0	**7**	19	**1**	0	20	54
07:30 AM	3	**43**	0	**46**	**5**	2	0	7	15	0	0	15	**68**
07:45 AM	**6**	33	0	39	4	3	0	7	10	1	0	11	57
08:00 AM	2	15	0	17	2	3	0	5	**20**	1	0	**21**	43
Total Volume	13	116	0	129	13	13	0	26	64	3	0	67	222
% App. Total	10.1	89.9	0		50	50	0		95.5	4.5	0		
PHF	.542	.674	.000	.701	.650	.650	.000	.929	.800	.750	.000	.798	.816



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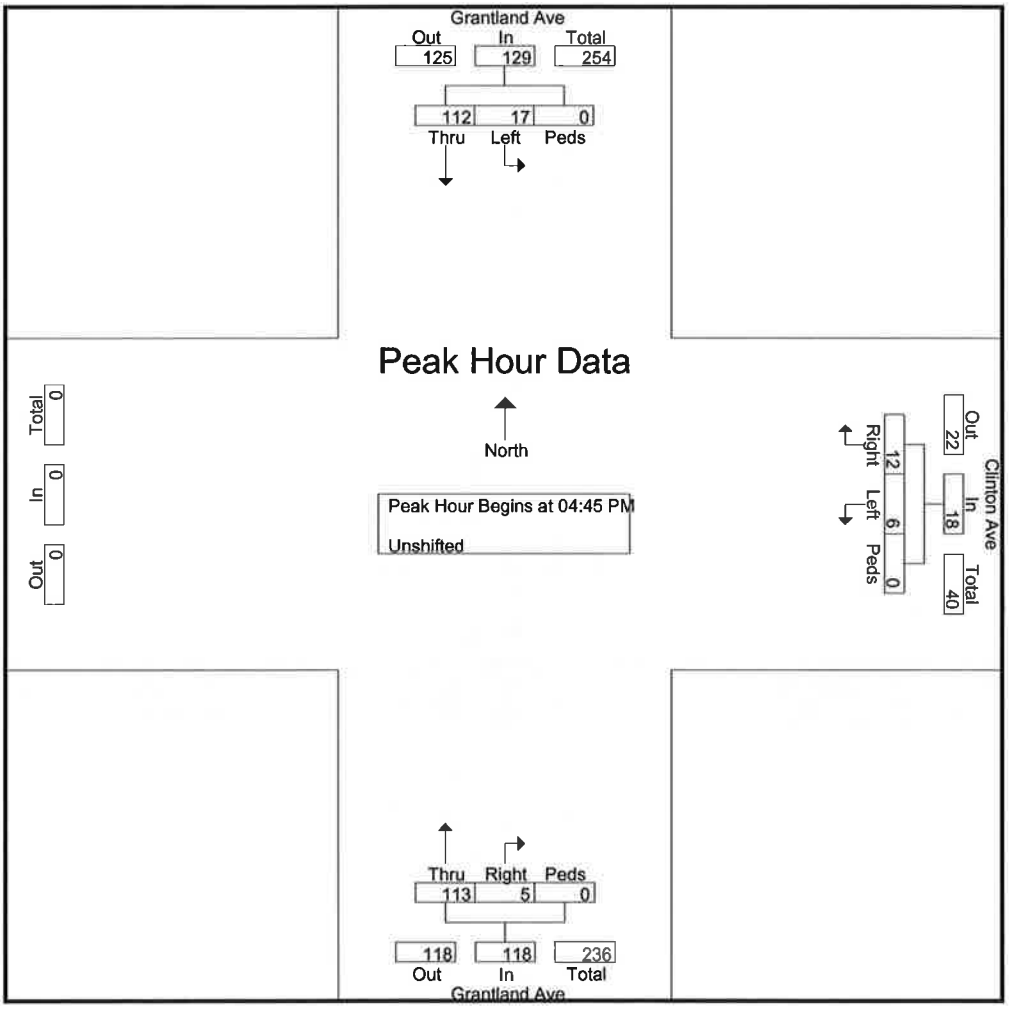
File Name : Grantland Avenue at Clinton Avenue
Site Code : 00003818
Start Date : 3/8/2018
Page No : 3

	Grantland Ave Southbound				Clinton Ave Westbound				Grantland Ave Northbound				
Start Time	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	4	**34**	0	**38**	**2**	**4**	0	**6**	20	1	0	21	65
05:00 PM	**7**	30	0	37	2	2	0	4	**33**	1	0	**34**	**75**
05:15 PM	4	28	0	32	1	4	0	5	31	1	0	32	69
05:30 PM	2	20	0	22	1	2	0	3	29	**2**	0	31	56
Total Volume	17	112	0	129	6	12	0	18	113	5	0	118	265
% App. Total	13.2	86.8	0		33.3	66.7	0		95.8	4.2	0		
PHF	.607	.824	.000	.849	.750	.750	.000	.750	.856	.625	.000	.868	.883



Prepared by NDS/ATD

VOLUME

Grantland Ave Bet. Ashlan Ave & Shields Ave

Day: Thursday
Date: 3/8/2018

City: Fresno
Project #: CA18_2030_013

DAILY TOTALS	NB	SB	EB	WB	Total
	1,334	1,759	0	0	3,093

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	1		2				3		12:00	25		21				46	
00:15	2		3				5		12:15	21		18				39	
00:30	1		1				2		12:30	14		20				34	
00:45	0	4	1	7			1	11	12:45	24	84	21	80			45	164
01:00	3		2				5		13:00	30		27				57	
01:15	3		0				3		13:15	35		32				67	
01:30	2		0				2		13:30	28		21				49	
01:45	0	8	0	2			0	10	13:45	25	118	27	107			52	225
02:00	0		1				1		14:00	20		31				51	
02:15	0		0				0		14:15	18		32				50	
02:30	0		0				0		14:30	29		40				69	
02:45	0		2	3			2	3	14:45	21	88	41	144			62	232
03:00	1		1				2		15:00	22		35				57	
03:15	1		0				1		15:15	40		36				76	
03:30	1		0				1		15:30	31		36				67	
03:45	0	3	2	3			2	6	15:45	37	130	31	138			68	268
04:00	1		0				1		16:00	38		38				76	
04:15	8		2				10		16:15	30		47				77	
04:30	3		1				4		16:30	33		37				70	
04:45	2	14	5	8			7	22	16:45	35	136	52	174			87	310
05:00	4		2				6		17:00	36		47				83	
05:15	7		7				14		17:15	44		45				89	
05:30	5		6				11		17:30	35		34				69	
05:45	9	25	7	22			16	47	17:45	28	143	37	163			65	306
06:00	9		7				16		18:00	26		40				66	
06:15	7		18				25		18:15	17		36				53	
06:30	20		28				48		18:30	17		34				51	
06:45	19	55	32	85			51	140	18:45	12	72	36	146			48	218
07:00	24		34				58		19:00	13		18				31	
07:15	33		52				85		19:15	13		13				26	
07:30	28		65				93		19:30	11		20				31	
07:45	21	106	48	199			69	305	19:45	4	41	12	63			16	104
08:00	22		24				46		20:00	4		9				13	
08:15	29		19				48		20:15	4		13				17	
08:30	18		19				37		20:30	3		13				16	
08:45	16	85	28	90			44	175	20:45	5	16	12	47			17	63
09:00	23		15				38		21:00	1		18				19	
09:15	20		13				33		21:15	3		12				15	
09:30	12		18				30		21:30	5		7				12	
09:45	12	67	22	68			34	135	21:45	5	14	9	46			14	60
10:00	19		21				40		22:00	1		7				8	
10:15	11		17				28		22:15	3		8				11	
10:30	11		21				32		22:30	1		1				2	
10:45	14	55	16	75			30	130	22:45	4	9	4	20			8	29
11:00	16		15				31		23:00	3		3				6	
11:15	14		14				28		23:15	1		4				5	
11:30	16		10				26		23:30	1		2				3	
11:45	10	56	18	57			28	113	23:45	0	5	3	12			3	17
TOTALS		478		619				1097	TOTALS		856		1140				1996
SPLIT %		43.6%		56.4%				35.5%	SPLIT %		42.9%		57.1%				64.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	1,334	1,759	0	0	3,093

AM Peak Hour	07:00	07:00	07:00	PM Peak Hour	16:45	16:15	16:30
AM Pk Volume	106	199	305	PM Pk Volume	150	183	329
Pk Hr Factor	0.803	0.765	0.820	Pk Hr Factor	0.852	0.880	0.924
7 - 9 Volume	191	289	480	4 - 6 Volume	279	337	616
7 - 9 Peak Hour	07:00	07:00	07:00	4 - 6 Peak Hour	16:45	16:15	16:30
7 - 9 Pk Volume	106	199	305	4 - 6 Pk Volume	150	183	329
Pk Hr Factor	0.803	0.765	0.820	Pk Hr Factor	0.852	0.880	0.924

Prepared by NDS/ATD

VOLUME

Grantland Ave 700' N/O Ashlan Ave

Day: Thursday
Date: 3/8/2018

City: Fresno
Project #: CA18_2030_012

DAILY TOTALS	NB	SB	EB	WB	Total
	2,095	2,339	0	0	4,434

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	2		3				5		12:00	31		27				58	
00:15	2		3				5		12:15	34		25				59	
00:30	1		0				1		12:30	28		28				56	
00:45	0	5	1	7			1	12	12:45	37	130	39	119			76	249
01:00	3		1				4		13:00	45		20				65	
01:15	4		0				4		13:15	56		39				95	
01:30	1		0				1		13:30	68		32				100	
01:45	1	9	0	1			1	10	13:45	41	210	27	118			68	328
02:00	0		1				1		14:00	46		38				84	
02:15	0		0				0		14:15	35		41				76	
02:30	0		0				0		14:30	67		49				116	
02:45	1	1	2	3			3	4	14:45	53	201	60	188			113	389
03:00	1		4				5		15:00	41		42				83	
03:15	1		0				1		15:15	55		42				97	
03:30	2		0				2		15:30	51		55				106	
03:45	0	4	1	5			1	9	15:45	52	199	50	189			102	388
04:00	2		0				2		16:00	64		48				112	
04:15	7		1				8		16:15	49		61				110	
04:30	3		1				4		16:30	50		68				118	
04:45	4	16	4	6			8	22	16:45	60	223	73	250			133	473
05:00	5		1				6		17:00	48		74				122	
05:15	15		6				21		17:15	59		63				122	
05:30	11		6				17		17:30	51		62				113	
05:45	12	43	6	19			18	62	17:45	53	211	68	267			121	478
06:00	9		12				21		18:00	55		81				136	
06:15	10		19				29		18:15	30		60				90	
06:30	27		31				58		18:30	37		59				96	
06:45	25	71	43	105			68	176	18:45	29	151	59	259			88	410
07:00	33		64				97		19:00	23		32				55	
07:15	45		41				86		19:15	24		16				40	
07:30	41		53				94		19:30	15		19				34	
07:45	31	150	48	206			79	356	19:45	10	72	13	80			23	152
08:00	35		20				55		20:00	5		15				20	
08:15	22		29				51		20:15	8		15				23	
08:30	30		23				53		20:30	4		12				16	
08:45	20	107	33	105			53	212	20:45	6	23	18	60			24	83
09:00	30		18				48		21:00	9		22				31	
09:15	21		20				41		21:15	4		17				21	
09:30	12		23				35		21:30	6		5				11	
09:45	17	80	21	82			38	162	21:45	6	25	9	53			15	78
10:00	14		26				40		22:00	4		9				13	
10:15	14		24				38		22:15	3		9				12	
10:30	16		26				42		22:30	1		0				1	
10:45	22	66	26	102			48	168	22:45	4	12	4	22			8	34
11:00	16		16				32		23:00	3		0				3	
11:15	19		23				42		23:15	3		4				7	
11:30	25		26				51		23:30	2		2				4	
11:45	16	76	21	86			37	162	23:45	2	10	1	7			3	17
TOTALS		628		727				1355	TOTALS		1467		1612				3079
SPLIT %		46.3%		53.7%				30.6%	SPLIT %		47.6%		52.4%				69.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	2,095	2,339	0	0	4,434

AM Peak Hour	07:15	07:00	07:00	PM Peak Hour	16:00	16:30	16:30
AM Pk Volume	152	206	356	PM Pk Volume	223	278	495
Pk Hr Factor	0.844	0.805	0.918	Pk Hr Factor	0.871	0.939	0.930
7 - 9 Volume	257	311	568	4 - 6 Volume	434	517	951
7 - 9 Peak Hour	07:15	07:00	07:00	4 - 6 Peak Hour	16:00	16:30	16:30
7 - 9 Pk Volume	152	206	356	4 - 6 Pk Volume	223	278	495
Pk Hr Factor	0.844	0.805	0.918	Pk Hr Factor	0.871	0.939	0.930

Prepared by NDS/ATD

VOLUME

Ashlan Ave 700' E/O Grantland Ave

Day: Thursday
Date: 3/8/2018

City: Fresno
Project #: CA18_2030_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,175	1,243	2,418

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			0		0		0		12:00			12		7		19	
00:15			4		5		9		12:15			16		21		37	
00:30			0		0		0		12:30			14		21		35	
00:45			0	4	0	5	0	9	12:45			22	64	16	65	38	129
01:00			0		2		2		13:00			20		34		54	
01:15			0		1		1		13:15			17		32		49	
01:30			1		0		1		13:30			11		35		46	
01:45			0	1	1	4	1	5	13:45			11	59	22	123	33	182
02:00			0		0		0		14:00			22		36		58	
02:15			0		0		0		14:15			16		22		38	
02:30			0		0		0		14:30			27		56		83	
02:45			0		1	1	1	1	14:45			33	98	39	153	72	251
03:00			1		0		1		15:00			16		36		52	
03:15			0		0		0		15:15			33		28		61	
03:30			0		0		0		15:30			34		27		61	
03:45			0	1	2	2	2	3	15:45			34	117	24	115	58	232
04:00			0		0		0		16:00			24		34		58	
04:15			1		1		2		16:15			20		22		42	
04:30			1		0		1		16:30			29		26		55	
04:45			0	2	0	1	0	3	16:45			31	104	31	113	62	217
05:00			2		3		5		17:00			45		22		67	
05:15			1		11		12		17:15			39		27		66	
05:30			1		6		7		17:30			33		21		54	
05:45			3	7	4	24	7	31	17:45			43	160	39	109	82	269
06:00			5		3		8		18:00			49		39		88	
06:15			4		4		8		18:15			35		24		59	
06:30			8		17		25		18:30			36		24		60	
06:45			22	39	12	36	34	75	18:45			29	149	19	106	48	255
07:00			46		29		75		19:00			19		12		31	
07:15			31		41		72		19:15			14		15		29	
07:30			17		43		60		19:30			5		12		17	
07:45			12	106	19	132	31	238	19:45			7	45	7	46	14	91
08:00			11		25		36		20:00			7		2		9	
08:15			15		11		26		20:15			2		6		8	
08:30			12		13		25		20:30			3		4		7	
08:45			12	50	10	59	22	109	20:45			7	19	2	14	9	33
09:00			15		15		30		21:00			8		11		19	
09:15			7		7		14		21:15			5		3		8	
09:30			8		4		12		21:30			3		5		8	
09:45			2	32	10	36	12	68	21:45			3	19	4	23	7	42
10:00			11		5		16		22:00			3		4		7	
10:15			10		4		14		22:15			3		2		5	
10:30			8		6		14		22:30			0		1		1	
10:45			9	38	10	25	19	63	22:45			3	9	3	10	6	19
11:00			6		3		9		23:00			1		3		4	
11:15			7		5		12		23:15			0		1		1	
11:30			23		12		35		23:30			0		2		2	
11:45			15	51	12	32	27	83	23:45			0	1	3	9	3	10
TOTALS				331		357		688	TOTALS				844		886		1730
SPLIT %				48.1%		51.9%		28.5%	SPLIT %				48.8%		51.2%		71.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,175	1,243	2,418

AM Peak Hour	06:45	07:00	06:45	PM Peak Hour	17:15	14:30	17:15
AM Pk Volume	116	132	241	PM Pk Volume	164	159	290
Pk Hr Factor	0.630	0.767	0.803	Pk Hr Factor	0.837	0.710	0.824
7 - 9 Volume	156	191	347	4 - 6 Volume	264	222	486
7 - 9 Peak Hour	07:00	07:00	07:00	4 - 6 Peak Hour	17:00	16:00	17:00
7 - 9 Pk Volume	106	132	238	4 - 6 Pk Volume	160	113	269
Pk Hr Factor	0.576	0.767	0.793	Pk Hr Factor	0.889	0.831	0.820

Prepared by NDS/ATD

VOLUME

Bryan Ave 400' N/O Ashlan Ave

Day: Thursday
Date: 3/8/2018

City: Fresno
Project #: CA18_2030_016

DAILY TOTALS	NB	SB	EB	WB	Total
	1,214	1,330	0	0	2,544

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	1		0				1		12:00	11		11				22	
00:15	0		0				0		12:15	8		8				16	
00:30	0		1				1		12:30	8		12				20	
00:45	0	1	0	1			0	2	12:45	10	37	23	54			33	91
01:00	0		0				0		13:00	22		23				45	
01:15	0		0				0		13:15	11		11				22	
01:30	0		0				0		13:30	10		17				27	
01:45	0		0				0		13:45	8	51	9	60			17	111
02:00	0		0				0		14:00	13		17				30	
02:15	0		0				0		14:15	17		14				31	
02:30	1		0				1		14:30	28		12				40	
02:45	0	1	1	1			1	2	14:45	46	104	9	52			55	156
03:00	1		0				1		15:00	76		61				137	
03:15	0		0				0		15:15	26		88				114	
03:30	0		0				0		15:30	14		15				29	
03:45	1	2	1	1			2	3	15:45	13	129	7	171			20	300
04:00	0		1				1		16:00	13		12				25	
04:15	0		2				2		16:15	26		16				42	
04:30	0		0				0		16:30	33		52				85	
04:45	1	1	0	3			1	4	16:45	25	97	29	109			54	206
05:00	2		1				3		17:00	18		28				46	
05:15	2		3				5		17:15	27		36				63	
05:30	3		4				7		17:30	25		30				55	
05:45	1	8	1	9			2	17	17:45	14	84	36	130			50	214
06:00	2		4				6		18:00	24		44				68	
06:15	2		2				4		18:15	18		29				47	
06:30	11		14				25		18:30	24		38				62	
06:45	13	28	12	32			25	60	18:45	12	78	15	126			27	204
07:00	22		27				49		19:00	13		13				26	
07:15	35		53				88		19:15	10		16				26	
07:30	57		76				133		19:30	19		13				32	
07:45	52	166	36	192			88	358	19:45	25	67	15	57			40	124
08:00	89		73				162		20:00	10		12				22	
08:15	90		75				165		20:15	14		4				18	
08:30	16		39				55		20:30	7		1				8	
08:45	9	204	15	202			24	406	20:45	2	33	2	19			4	52
09:00	11		10				21		21:00	2		0				2	
09:15	6		6				12		21:15	4		2				6	
09:30	8		10				18		21:30	4		0				4	
09:45	12	37	8	34			20	71	21:45	5	15	0	2			5	17
10:00	7		7				14		22:00	4		4				8	
10:15	6		7				13		22:15	2		0				2	
10:30	5		6				11		22:30	2		0				2	
10:45	8	26	11	31			19	57	22:45	2	10	3	7			5	17
11:00	4		4				8		23:00	0		1				1	
11:15	9		14				23		23:15	2		1				3	
11:30	8		9				17		23:30	0		1				1	
11:45	11	32	5	32			16	64	23:45	1	3	2	5			3	8
TOTALS		506		538				1044	TOTALS		708		792				1500
SPLIT %		48.5%		51.5%				41.0%	SPLIT %		47.2%		52.8%				59.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	1,214	1,330	0	0	2,544

AM Peak Hour	07:30	07:30	07:30	PM Peak Hour	14:30	14:45	14:30
AM Pk Volume	288	260	548	PM Pk Volume	176	173	346
Pk Hr Factor	0.800	0.855	0.830	Pk Hr Factor	0.579	0.491	0.631
7 - 9 Volume	370	394	764	4 - 6 Volume	181	239	420
7 - 9 Peak Hour	07:30	07:30	07:30	4 - 6 Peak Hour	16:30	16:30	16:30
7 - 9 Pk Volume	288	260	548	4 - 6 Pk Volume	103	145	248
Pk Hr Factor	0.800	0.855	0.830	Pk Hr Factor	0.780	0.697	0.729

Prepared by NDS/ATD

VOLUME

Ashlan Ave 500' W/O Bryan Ave

Day: Thursday
Date: 3/8/2018

City: Fresno
Project #: CA18_2030_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,606	1,601	3,207

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			0	0	0	12:00			13	12	25
00:15			5	4	9	12:15			19	24	43
00:30			0	0	0	12:30			16	25	41
00:45			0	5	0	4	0	9	12:45			26	74	18	79	44	153
01:00			0	2	2	13:00			67	100	167
01:15			0	1	1	13:15			36	44	80
01:30			1	0	1	13:30			18	39	57
01:45			0	1	1	4	1	5	13:45			18	139	33	216	51	355
02:00			0	0	0	14:00			21	44	65
02:15			0	0	0	14:15			19	24	43
02:30			0	0	0	14:30			24	60	84
02:45			0	1	1	1	1	14:45			30	94	42	170	72	264
03:00			1	0	1	15:00			28	67	95
03:15			0	0	0	15:15			31	40	71
03:30			0	0	0	15:30			28	29	57
03:45			0	1	2	2	2	3	15:45			38	125	28	164	66	289
04:00			0	0	0	16:00			34	44	78
04:15			1	1	2	16:15			20	23	43
04:30			0	0	0	16:30			29	30	59
04:45			0	1	0	1	0	2	16:45			31	114	35	132	66	246
05:00			2	2	4	17:00			46	18	64
05:15			2	11	13	17:15			34	25	59
05:30			1	7	8	17:30			34	23	57
05:45			5	10	5	25	10	35	17:45			44	158	40	106	84	264
06:00			6	4	10	18:00			51	43	94
06:15			7	4	11	18:15			34	24	58
06:30			35	14	49	18:30			50	52	102
06:45			29	77	16	38	45	115	18:45			41	176	34	153	75	329
07:00			67	27	94	19:00			18	17	35
07:15			109	51	160	19:15			10	16	26
07:30			126	75	201	19:30			5	12	17
07:45			26	328	21	174	47	502	19:45			7	40	8	53	15	93
08:00			21	26	47	20:00			9	3	12
08:15			22	7	29	20:15			1	6	7
08:30			12	15	27	20:30			3	7	10
08:45			13	68	14	62	27	130	20:45			5	18	2	18	7	36
09:00			16	23	39	21:00			6	15	21
09:15			11	9	20	21:15			6	3	9
09:30			9	4	13	21:30			3	5	8
09:45			5	41	15	51	20	92	21:45			3	18	4	27	7	45
10:00			14	5	19	22:00			3	4	7
10:15			15	9	24	22:15			3	3	6
10:30			8	8	16	22:30			2	2	4
10:45			14	51	15	37	29	88	22:45			2	10	3	12	5	22
11:00			7	2	9	23:00			0	3	3
11:15			11	15	26	23:15			0	1	1
11:30			25	27	52	23:30			1	2	3
11:45			13	56	20	64	33	120	23:45			0	1	2	8	2	9
TOTALS				639	463	**1102**	**TOTALS**				967	1138	**2105**
SPLIT %				58.0%	42.0%	**34.4%**	**SPLIT %**				45.9%	54.1%	**65.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,606	1,601	3,207

AM Peak Hour	06:45	07:00	**07:00**	**PM Peak Hour**	17:45	13:00	**13:00**
AM Pk Volume	331	174	**502**	**PM Pk Volume**	179	216	**355**
Pk Hr Factor	0.657	0.580	**0.624**	**Pk Hr Factor**	0.877	0.540	**0.531**
7 - 9 Volume	396	236	**632**	**4 - 6 Volume**	272	238	**510**
7 - 9 Peak Hour	07:00	07:00	**07:00**	**4 - 6 Peak Hour**	17:00	16:00	**17:00**
7 - 9 Pk Volume	328	174	**502**	**4 - 6 Pk Volume**	158	132	**264**
Pk Hr Factor	0.651	0.580	**0.624**	**Pk Hr Factor**	0.859	0.750	**0.786**

Prepared by NDS/ATD

VOLUME

Ashlan Ave Bet. Bryan Ave and Hayes Ave

Day: Thursday
Date: 3/8/2018

City: Fresno
Project #: CA18_2030_003

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,096	2,106	4,202

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			0		1		1		12:00			18		15		33	
00:15			3		4		7		12:15			20		30		50	
00:30			0		0		0		12:30			17		32		49	
00:45			0	3	1	6	1	9	12:45			23	78	25	102	48	180
01:00			0		2		2		13:00			72		47		119	
01:15			0		1		1		13:15			33		46		79	
01:30			1		0		1		13:30			30		38		68	
01:45			0	1	1	4	1	5	13:45			22	157	33	164	55	321
02:00			0		0		0		14:00			21		38		59	
02:15			0		0		0		14:15			26		34		60	
02:30			0		1		1		14:30			21		73		94	
02:45			2	2	1	2	3	4	14:45			32	100	69	214	101	314
03:00			1		2		3		15:00			60		75		135	
03:15			0		0		0		15:15			98		30		128	
03:30			0		0		0		15:30			28		23		51	
03:45			1	2	2	4	3	6	15:45			37	223	34	162	71	385
04:00			1		0		1		16:00			43		44		87	
04:15			3		2		5		16:15			23		36		59	
04:30			1		0		1		16:30			59		46		105	
04:45			2	7	0	2	2	9	16:45			38	163	39	165	77	328
05:00			2		2		4		17:00			54		29		83	
05:15			4		11		15		17:15			39		44		83	
05:30			5		8		13		17:30			45		56		101	
05:45			6	17	3	24	9	41	17:45			39	177	52	181	91	358
06:00			5		9		14		18:00			44		52		96	
06:15			6		12		18		18:15			39		51		90	
06:30			35		45		80		18:30			68		48		116	
06:45			32	78	28	94	60	172	18:45			57	208	27	178	84	386
07:00			71		58		129		19:00			38		16		54	
07:15			74		126		200		19:15			19		19		38	
07:30			122		68		190		19:30			18		8		26	
07:45			37	304	70	322	107	626	19:45			22	97	5	48	27	145
08:00			61		90		151		20:00			14		9		23	
08:15			71		69		140		20:15			17		8		25	
08:30			50		23		73		20:30			12		7		19	
08:45			19	201	12	194	31	395	20:45			9	52	4	28	13	80
09:00			22		20		42		21:00			9		14		23	
09:15			16		11		27		21:15			9		6		15	
09:30			9		7		16		21:30			5		10		15	
09:45			8	55	14	52	22	107	21:45			2	25	6	36	8	61
10:00			13		7		20		22:00			3		3		6	
10:15			20		18		38		22:15			4		6		10	
10:30			9		9		18		22:30			2		2		4	
10:45			21	63	15	49	36	112	22:45			3	12	5	16	8	28
11:00			10		5		15		23:00			0		3		3	
11:15			13		12		25		23:15			2		2		4	
11:30			26		15		41		23:30			3		3		6	
11:45			15	64	16	48	31	112	23:45			2	7	3	11	5	18
TOTALS				797		801		**1598**	**TOTALS**				1299		1305		**2604**
SPLIT %				49.9%		50.1%		**38.0%**	**SPLIT %**				49.9%		50.1%		**62.0%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,096	2,106	4,202

AM Peak Hour	07:00	07:15	**07:15**	**PM Peak Hour**	15:00	14:15	**14:30**
AM Pk Volume	304	354	**648**	**PM Pk Volume**	223	251	**458**
Pk Hr Factor	0.623	0.702	**0.810**	**Pk Hr Factor**	0.569	0.837	**0.848**
7 - 9 Volume	505	516	**1021**	**4 - 6 Volume**	340	346	**686**
7 - 9 Peak Hour	07:00	07:15	**07:15**	**4 - 6 Peak Hour**	16:30	17:00	**17:00**
7 - 9 Pk Volume	304	354	**648**	**4 - 6 Pk Volume**	190	181	**358**
Pk Hr Factor	0.623	0.702	**0.810**	**Pk Hr Factor**	0.805	0.808	**0.886**

Prepared by NDS/ATD

VOLUME

Bryan Ave Bet. Ashlan & Shields Ave

Day: Thursday
Date: 3/8/2018

City: Fresno
Project #: CA18_2030_017

DAILY TOTALS	NB	SB	EB	WB	Total
	506	477	0	0	983

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	0		0				0		12:00	8		2				10	
00:15	0		0				0		12:15	4		2				6	
00:30	0		0				0		12:30	3		3				6	
00:45	0		0				0		12:45	16	31	5	12			21	43
01:00	1		1				2		13:00	15		13				28	
01:15	0		0				0		13:15	13		11				24	
01:30	0		0				0		13:30	8		8				16	
01:45	0	1	0	1			0	2	13:45	6	42	5	37			11	79
02:00	1		0				1		14:00	2		4				6	
02:15	0		0				0		14:15	2		8				10	
02:30	0		0				0		14:30	10		4				14	
02:45	0	1	0				0	1	14:45	14	28	5	21			19	49
03:00	0		1				1		15:00	23		12				35	
03:15	1		0				1		15:15	7		23				30	
03:30	0		0				0		15:30	8		4				12	
03:45	0	1	0	1			0	2	15:45	10	48	9	48			19	96
04:00	0		0				0		16:00	3		12				15	
04:15	2		1				3		16:15	11		7				18	
04:30	1		0				1		16:30	5		11				16	
04:45	3	6	0	1			3	7	16:45	6	25	8	38			14	63
05:00	1		0				1		17:00	12		6				18	
05:15	2		1				3		17:15	8		14				22	
05:30	6		3				9		17:30	8		5				13	
05:45	2	11	1	5			3	16	17:45	9	37	5	30			14	67
06:00	1		4				5		18:00	6		11				17	
06:15	4		3				7		18:15	9		8				17	
06:30	5		5				10		18:30	9		16				25	
06:45	2	12	5	17			7	29	18:45	4	28	12	47			16	75
07:00	12		12				24		19:00	2		6				8	
07:15	42		14				56		19:15	4		7				11	
07:30	57		43				100		19:30	3		4				7	
07:45	13	124	16	85			29	209	19:45	3	12	8	25			11	37
08:00	12		11				23		20:00	3		12				15	
08:15	12		15				27		20:15	4		6				10	
08:30	4		4				8		20:30	5		2				7	
08:45	4	32	2	32			6	64	20:45	2	14	0	20			2	34
09:00	2		3				5		21:00	1		0				1	
09:15	3		2				5		21:15	2		3				5	
09:30	2		2				4		21:30	1		3				4	
09:45	7	14	2	9			9	23	21:45	0	4	0	6			0	10
10:00	2		3				5		22:00	1		1				2	
10:15	2		4				6		22:15	3		1				4	
10:30	4		2				6		22:30	1		0				1	
10:45	5	13	8	17			13	30	22:45	0	5	1	3			1	8
11:00	2		2				4		23:00	0		1				1	
11:15	2		8				10		23:15	2		0				2	
11:30	7		5				12		23:30	0		2				2	
11:45	4	15	4	19			8	34	23:45	0	2	0	3			0	5
TOTALS		230		187				417	TOTALS		276		290				566
SPLIT %		55.2%		44.8%				42.4%	SPLIT %		48.8%		51.2%				57.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	506	477	0	0	983

AM Peak Hour	07:00	07:00	07:00	PM Peak Hour	14:30	15:00	14:30
AM Pk Volume	124	85	209	PM Pk Volume	54	48	98
Pk Hr Factor	0.544	0.494	0.523	Pk Hr Factor	0.587	0.522	0.700
7 - 9 Volume	156	117	273	4 - 6 Volume	62	68	130
7 - 9 Peak Hour	07:00	07:00	07:00	4 - 6 Peak Hour	17:00	16:30	16:30
7 - 9 Pk Volume	124	85	209	4 - 6 Pk Volume	37	39	70
Pk Hr Factor	0.544	0.494	0.523	Pk Hr Factor	0.771	0.696	0.795

Prepared by NDS/ATD

VOLUME

Shields Ave Bet. Grantland Ave & Bryan Ave

Day: Thursday
Date: 3/8/2018

City: Fresno
Project #: CA18_2030_005

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,580	1,413	2,993

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			2		4		6		12:00			30		23		53	
00:15			0		0		0		12:15			29		11		40	
00:30			0		1		1		12:30			13		13		26	
00:45			0	2	1	6	1	8	12:45			26	98	22	69	48	167
01:00			3		1		4		13:00			32		20		52	
01:15			1		1		2		13:15			25		17		42	
01:30			1		1		2		13:30			22		11		33	
01:45			0	5	1	4	1	9	13:45			16	95	25	73	41	168
02:00			1		2		3		14:00			15		30		45	
02:15			0		1		1		14:15			17		30		47	
02:30			1		1		2		14:30			48		27		75	
02:45			2	4	0	4	2	8	14:45			41	121	29	116	70	237
03:00			0		2		2		15:00			26		40		66	
03:15			0		3		3		15:15			53		23		76	
03:30			1		5		6		15:30			35		22		57	
03:45			0	1	3	13	3	14	15:45			27	141	36	121	63	262
04:00			0		2		2		16:00			42		30		72	
04:15			1		3		4		16:15			50		24		74	
04:30			3		1		4		16:30			46		29		75	
04:45			2	6	5	11	7	17	16:45			48	186	28	111	76	297
05:00			2		3		5		17:00			33		28		61	
05:15			6		9		15		17:15			42		24		66	
05:30			4		10		14		17:30			30		24		54	
05:45			4	16	9	31	13	47	17:45			37	142	24	100	61	242
06:00			4		16		20		18:00			36		13		49	
06:15			9		13		22		18:15			36		17		53	
06:30			12		11		23		18:30			27		19		46	
06:45			13	38	38	78	51	116	18:45			27	126	12	61	39	187
07:00			23		62		85		19:00			16		18		34	
07:15			53		40		93		19:15			14		20		34	
07:30			47		21		68		19:30			13		11		24	
07:45			38	161	36	159	74	320	19:45			12	55	13	62	25	117
08:00			27		37		64		20:00			7		11		18	
08:15			34		38		72		20:15			9		6		15	
08:30			29		35		64		20:30			9		8		17	
08:45			19	109	32	142	51	251	20:45			11	36	5	30	16	66
09:00			27		17		44		21:00			12		5		17	
09:15			14		11		25		21:15			5		10		15	
09:30			13		12		25		21:30			8		7		15	
09:45			12	66	8	48	20	114	21:45			8	33	3	25	11	58
10:00			13		12		25		22:00			7		7		14	
10:15			13		16		29		22:15			1		2		3	
10:30			28		21		49		22:30			3		1		4	
10:45			17	71	12	61	29	132	22:45			3	14	4	14	7	28
11:00			10		11		21		23:00			2		6		8	
11:15			14		10		24		23:15			2		5		7	
11:30			12		12		24		23:30			0		3		3	
11:45			12	48	27	60	39	108	23:45			2	6	0	14	2	20
TOTALS				527		617		**1144**	**TOTALS**				1053		796		**1849**
SPLIT %				46.1%		53.9%		**38.2%**	**SPLIT %**				56.9%		43.1%		**61.8%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,580	1,413	2,993

AM Peak Hour	07:15	06:45	**07:00**	**PM Peak Hour**	16:00	14:15	**16:00**
AM Pk Volume	165	161	**320**	**PM Pk Volume**	186	126	**297**
Pk Hr Factor	0.778	0.649	**0.860**	**Pk Hr Factor**	0.930	0.788	**0.977**
7 - 9 Volume	270	301	**571**	**4 - 6 Volume**	328	211	**539**
7 - 9 Peak Hour	07:15	07:00	**07:00**	**4 - 6 Peak Hour**	16:00	16:00	**16:00**
7 - 9 Pk Volume	165	159	**320**	**4 - 6 Pk Volume**	186	111	**297**
Pk Hr Factor	0.778	0.641	**0.860**	**Pk Hr Factor**	0.930	0.925	**0.977**

Prepared by NDS/ATD

VOLUME

Shields Ave Bet. Garfield Ave & Grantland Ave

Day: Thursday
Date: 3/8/2018

City: Fresno
Project #: CA18_2030_004

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,422	1,419	2,841

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			1		2		3		12:00			38		24		62	
00:15			1		0		1		12:15			28		17		45	
00:30			0		1		1		12:30			13		13		26	
00:45			0	2	0	3	0	5	12:45			20	99	23	77	43	176
01:00			3		1		4		13:00			36		22		58	
01:15			0		1		1		13:15			25		12		37	
01:30			1		0		1		13:30			16		13		29	
01:45			0	4	1	3	1	7	13:45			16	93	18	65	34	158
02:00			1		0		1		14:00			21		34		55	
02:15			0		1		1		14:15			19		31		50	
02:30			1		2		3		14:30			47		30		77	
02:45			1	3	0	3	1	6	14:45			38	125	31	126	69	251
03:00			0		1		1		15:00			38		47		85	
03:15			0		2		2		15:15			56		22		78	
03:30			1		4		5		15:30			28		20		48	
03:45			0	1	4	11	4	12	15:45			23	145	24	113	47	258
04:00			1		2		3		16:00			37		25		62	
04:15			1		1		2		16:15			32		20		52	
04:30			2		0		2		16:30			41		23		64	
04:45			1	5	4	7	5	12	16:45			40	150	26	94	66	244
05:00			1		5		6		17:00			34		32		66	
05:15			6		9		15		17:15			37		25		62	
05:30			3		9		12		17:30			25		17		42	
05:45			6	16	9	32	15	48	17:45			30	126	20	94	50	220
06:00			7		15		22		18:00			27		13		40	
06:15			7		14		21		18:15			26		17		43	
06:30			10		15		25		18:30			15		18		33	
06:45			12	36	38	82	50	118	18:45			18	86	15	63	33	149
07:00			19		73		92		19:00			12		14		26	
07:15			53		54		107		19:15			11		15		26	
07:30			44		34		78		19:30			9		8		17	
07:45			32	148	40	201	72	349	19:45			5	37	13	50	18	87
08:00			23		35		58		20:00			2		10		12	
08:15			46		50		96		20:15			3		7		10	
08:30			30		15		45		20:30			6		7		13	
08:45			20	119	37	137	57	256	20:45			5	16	5	29	10	45
09:00			33		16		49		21:00			6		6		12	
09:15			14		10		24		21:15			1		9		10	
09:30			10		9		19		21:30			4		8		12	
09:45			10	67	8	43	18	110	21:45			7	18	6	29	13	47
10:00			14		12		26		22:00			1		6		7	
10:15			10		15		25		22:15			3		4		7	
10:30			25		28		53		22:30			2		2		4	
10:45			14	63	13	68	27	131	22:45			3	9	3	15	6	24
11:00			11		10		21		23:00			1		7		8	
11:15			15		12		27		23:15			0		3		3	
11:30			15		11		26		23:30			0		4		4	
11:45			11	52	27	60	38	112	23:45			1	2	0	14	1	16
TOTALS				516		650		1166	TOTALS				906		769		1675
SPLIT %				44.3%		55.7%		41.0%	SPLIT %				54.1%		45.9%		59.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,422	1,419	2,841

AM Peak Hour	07:15	07:00	07:00	PM Peak Hour	14:30	14:15	14:30
AM Pk Volume	152	201	349	PM Pk Volume	179	139	309
Pk Hr Factor	0.717	0.688	0.815	Pk Hr Factor	0.799	0.739	0.909
7 - 9 Volume	267	338	605	4 - 6 Volume	276	188	464
7 - 9 Peak Hour	07:15	07:00	07:00	4 - 6 Peak Hour	16:30	16:30	16:30
7 - 9 Pk Volume	152	201	349	4 - 6 Pk Volume	152	106	258
Pk Hr Factor	0.717	0.688	0.815	Pk Hr Factor	0.927	0.828	0.977

Prepared by NDS/ATD

VOLUME

Grantland Ave Bet. Ashlan Ave & Shields Ave

Day: Thursday
Date: 3/8/2018

City: Fresno
Project #: CA18_2030_013

DAILY TOTALS	NB	SB	EB	WB	Total
	1,334	1,759	0	0	3,093

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	1		2				3		12:00	25		21				46	
00:15	2		3				5		12:15	21		18				39	
00:30	1		1				2		12:30	14		20				34	
00:45	0	4	1	7			1	11	12:45	24	84	21	80			45	164
01:00	3		2				5		13:00	30		27				57	
01:15	3		0				3		13:15	35		32				67	
01:30	2		0				2		13:30	28		21				49	
01:45	0	8	0	2			0	10	13:45	25	118	27	107			52	225
02:00	0		1				1		14:00	20		31				51	
02:15	0		0				0		14:15	18		32				50	
02:30	0		0				0		14:30	29		40				69	
02:45	0		2	3			2	3	14:45	21	88	41	144			62	232
03:00	1		1				2		15:00	22		35				57	
03:15	1		0				1		15:15	40		36				76	
03:30	1		0				1		15:30	31		36				67	
03:45	0	3	2	3			2	6	15:45	37	130	31	138			68	268
04:00	1		0				1		16:00	38		38				76	
04:15	8		2				10		16:15	30		47				77	
04:30	3		1				4		16:30	33		37				70	
04:45	2	14	5	8			7	22	16:45	35	136	52	174			87	310
05:00	4		2				6		17:00	36		47				83	
05:15	7		7				14		17:15	44		45				89	
05:30	5		6				11		17:30	35		34				69	
05:45	9	25	7	22			16	47	17:45	28	143	37	163			65	306
06:00	9		7				16		18:00	26		40				66	
06:15	7		18				25		18:15	17		36				53	
06:30	20		28				48		18:30	17		34				51	
06:45	19	55	32	85			51	140	18:45	12	72	36	146			48	218
07:00	24		34				58		19:00	13		18				31	
07:15	33		52				85		19:15	13		13				26	
07:30	28		65				93		19:30	11		20				31	
07:45	21	106	48	199			69	305	19:45	4	41	12	63			16	104
08:00	22		24				46		20:00	4		9				13	
08:15	29		19				48		20:15	4		13				17	
08:30	18		19				37		20:30	3		13				16	
08:45	16	85	28	90			44	175	20:45	5	16	12	47			17	63
09:00	23		15				38		21:00	1		18				19	
09:15	20		13				33		21:15	3		12				15	
09:30	12		18				30		21:30	5		7				12	
09:45	12	67	22	68			34	135	21:45	5	14	9	46			14	60
10:00	19		21				40		22:00	1		7				8	
10:15	11		17				28		22:15	3		8				11	
10:30	11		21				32		22:30	1		1				2	
10:45	14	55	16	75			30	130	22:45	4	9	4	20			8	29
11:00	16		15				31		23:00	3		3				6	
11:15	14		14				28		23:15	1		4				5	
11:30	16		10				26		23:30	1		2				3	
11:45	10	56	18	57			28	113	23:45	0	5	3	12			3	17
TOTALS		478		619				1097	TOTALS		856		1140				1996
SPLIT %		43.6%		56.4%				35.5%	SPLIT %		42.9%		57.1%				64.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	1,334	1,759	0	0	3,093

AM Peak Hour	07:00	07:00	07:00	PM Peak Hour	16:45	16:15	16:30
AM Pk Volume	106	199	305	PM Pk Volume	150	183	329
Pk Hr Factor	0.803	0.765	0.820	Pk Hr Factor	0.852	0.880	0.924
7 - 9 Volume	191	289	480	4 - 6 Volume	279	337	616
7 - 9 Peak Hour	07:00	07:00	07:00	4 - 6 Peak Hour	16:45	16:15	16:30
7 - 9 Pk Volume	106	199	305	4 - 6 Pk Volume	150	183	329
Pk Hr Factor	0.803	0.765	0.820	Pk Hr Factor	0.852	0.880	0.924

Prepared by NDS/ATD

VOLUME

Grantland Ave Bet. Shields Ave & Clinton Ave

Day: Thursday
Date: 3/8/2018

City: Fresno
Project #: CA18_2030_014

DAILY TOTALS	NB	SB	EB	WB	Total
	1,032	1,181	0	0	2,213

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	0		1				1		12:00	16		17				33	
00:15	0		2				2		12:15	16		11				27	
00:30	0		2				2		12:30	14		14				28	
00:45	0		1	6			1	6	12:45	21	67	12	54			33	121
01:00	0		0				0		13:00	21		10				31	
01:15	4		0				4		13:15	29		18				47	
01:30	1		0				1		13:30	19		14				33	
01:45	0	5	0				0	5	13:45	11	80	15	57			26	137
02:00	0		2				2		14:00	17		24				41	
02:15	1		1				2		14:15	20		19				39	
02:30	1		0				1		14:30	15		16				31	
02:45	0	2	2	5			2	7	14:45	18	70	20	79			38	149
03:00	0		2				2		15:00	18		24				42	
03:15	1		1				2		15:15	24		25				49	
03:30	1		0				1		15:30	32		24				56	
03:45	0	2	2	5			2	7	15:45	22	96	28	101			50	197
04:00	1		0				1		16:00	27		24				51	
04:15	3		1				4		16:15	18		29				47	
04:30	2		0				2		16:30	26		23				49	
04:45	3	9	2	3			5	12	16:45	24	95	44	120			68	215
05:00	3		1				4		17:00	33		36				69	
05:15	3		5				8		17:15	35		27				62	
05:30	6		8				14		17:30	30		23				53	
05:45	6	18	2	16			8	34	17:45	15	113	24	110			39	223
06:00	6		10				16		18:00	22		22				44	
06:15	4		12				16		18:15	14		24				38	
06:30	14		17				31		18:30	15		22				37	
06:45	19	43	18	57			37	100	18:45	10	61	23	91			33	152
07:00	24		22				46		19:00	13		14				27	
07:15	27		27				54		19:15	14		10				24	
07:30	18		46				64		19:30	7		12				19	
07:45	15	84	34	129			49	213	19:45	5	39	6	42			11	81
08:00	24		15				39		20:00	8		10				18	
08:15	17		13				30		20:15	4		8				12	
08:30	14		12				26		20:30	3		10				13	
08:45	14	69	22	62			36	131	20:45	5	20	11	39			16	59
09:00	9		9				18		21:00	3		13				16	
09:15	13		11				24		21:15	6		10				16	
09:30	10		14				24		21:30	3		5				8	
09:45	9	41	16	50			25	91	21:45	8	20	8	36			16	56
10:00	12		16				28		22:00	4		5				9	
10:15	9		9				18		22:15	2		8				10	
10:30	12		12				24		22:30	0		0				0	
10:45	13	46	9	46			22	92	22:45	3	9	3	16			6	25
11:00	11		15				26		23:00	1		1				2	
11:15	8		12				20		23:15	2		4				6	
11:30	7		10				17		23:30	0		1				1	
11:45	12	38	12	49			24	87	23:45	2	5	2	8			4	13
TOTALS		357		428				**785**	**TOTALS**		675		753				**1428**
SPLIT %		45.5%		54.5%				**35.5%**	**SPLIT %**		47.3%		52.7%				**64.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	1,032	1,181	0	0	2,213

AM Peak Hour	06:45	07:00	**07:00**	**PM Peak Hour**	16:45	16:15	**16:45**
AM Pk Volume	88	129	**213**	**PM Pk Volume**	122	132	**252**
Pk Hr Factor	0.815	0.701	**0.832**	**Pk Hr Factor**	0.871	0.750	**0.913**
7 - 9 Volume	153	191	**344**	**4 - 6 Volume**	208	230	**438**
7 - 9 Peak Hour	07:00	07:00	**07:00**	**4 - 6 Peak Hour**	16:45	16:15	**16:45**
7 - 9 Pk Volume	84	129	**213**	**4 - 6 Pk Volume**	122	132	**252**
Pk Hr Factor	0.778	0.701	**0.832**	**Pk Hr Factor**	0.871	0.750	**0.913**

Prepared by NDS/ATD

VOLUME

Grantland Ave Bet. Shields Ave & Clinton Ave

Day: Thursday
Date: 3/8/2018

City: Fresno
Project #: CA18_2030_014

DAILY TOTALS	NB	SB	EB	WB	Total
	1,032	1,181	0	0	2,213

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	0		1				1		12:00	16		17				33	
00:15	0		2				2		12:15	16		11				27	
00:30	0		2				2		12:30	14		14				28	
00:45	0		1	6			1	6	12:45	21	67	12	54			33	121
01:00	0		0				0		13:00	21		10				31	
01:15	4		0				4		13:15	29		18				47	
01:30	1		0				1		13:30	19		14				33	
01:45	0	5	0				0	5	13:45	11	80	15	57			26	137
02:00	0		2				2		14:00	17		24				41	
02:15	1		1				2		14:15	20		19				39	
02:30	1		0				1		14:30	15		16				31	
02:45	0	2	2	5			2	7	14:45	18	70	20	79			38	149
03:00	0		2				2		15:00	18		24				42	
03:15	1		1				2		15:15	24		25				49	
03:30	1		0				1		15:30	32		24				56	
03:45	0	2	2	5			2	7	15:45	22	96	28	101			50	197
04:00	1		0				1		16:00	27		24				51	
04:15	3		1				4		16:15	18		29				47	
04:30	2		0				2		16:30	26		23				49	
04:45	3	9	2	3			5	12	16:45	24	95	44	120			68	215
05:00	3		1				4		17:00	33		36				69	
05:15	3		5				8		17:15	35		27				62	
05:30	6		8				14		17:30	30		23				53	
05:45	6	18	2	16			8	34	17:45	15	113	24	110			39	223
06:00	6		10				16		18:00	22		22				44	
06:15	4		12				16		18:15	14		24				38	
06:30	14		17				31		18:30	15		22				37	
06:45	19	43	18	57			37	100	18:45	10	61	23	91			33	152
07:00	24		22				46		19:00	13		14				27	
07:15	27		27				54		19:15	14		10				24	
07:30	18		46				64		19:30	7		12				19	
07:45	15	84	34	129			49	213	19:45	5	39	6	42			11	81
08:00	24		15				39		20:00	8		10				18	
08:15	17		13				30		20:15	4		8				12	
08:30	14		12				26		20:30	3		10				13	
08:45	14	69	22	62			36	131	20:45	5	20	11	39			16	59
09:00	9		9				18		21:00	3		13				16	
09:15	13		11				24		21:15	6		10				16	
09:30	10		14				24		21:30	3		5				8	
09:45	9	41	16	50			25	91	21:45	8	20	8	36			16	56
10:00	12		16				28		22:00	4		5				9	
10:15	9		9				18		22:15	2		8				10	
10:30	12		12				24		22:30	0		0				0	
10:45	13	46	9	46			22	92	22:45	3	9	3	16			6	25
11:00	11		15				26		23:00	1		1				2	
11:15	8		12				20		23:15	2		4				6	
11:30	7		10				17		23:30	0		1				1	
11:45	12	38	12	49			24	87	23:45	2	5	2	8			4	13
TOTALS		357		428				785	TOTALS		675		753				1428
SPLIT %		45.5%		54.5%				35.5%	SPLIT %		47.3%		52.7%				64.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	1,032	1,181	0	0	2,213

AM Peak Hour	06:45	07:00	07:00	PM Peak Hour	16:45	16:15	16:45
AM Pk Volume	88	129	213	PM Pk Volume	122	132	252
Pk Hr Factor	0.815	0.701	0.832	Pk Hr Factor	0.871	0.750	0.913
7 - 9 Volume	153	191	344	4 - 6 Volume	208	230	438
7 - 9 Peak Hour	07:00	07:00	07:00	4 - 6 Peak Hour	16:45	16:15	16:45
7 - 9 Pk Volume	84	129	213	4 - 6 Pk Volume	122	132	252
Pk Hr Factor	0.778	0.701	0.832	Pk Hr Factor	0.871	0.750	0.913

Prepared by NDS/ATD

VOLUME

Grantland Ave Bet. Shields Ave & Yale Ave

Day: Thursday
Date: 3/8/2018

City: Fresno
Project #: CA18_2030_015

DAILY TOTALS	NB	SB	EB	WB	Total
	927	1,111	0	0	2,038

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	0		1				1		12:00	12		18				30	
00:15	0		1				1		12:15	13		7				20	
00:30	0		1				1		12:30	16		12				28	
00:45	0		1	4			1	4	12:45	17	58	12	49			29	107
01:00	0		0				0		13:00	18		13				31	
01:15	4		0				4		13:15	22		18				40	
01:30	1		0				1		13:30	11		9				20	
01:45	0	5	0				0	5	13:45	10	61	14	54			24	115
02:00	0		2				2		14:00	17		26				43	
02:15	1		1				2		14:15	17		18				35	
02:30	2		0				2		14:30	15		11				26	
02:45	0	3	0	3			0	6	14:45	15	64	20	75			35	139
03:00	0		1				1		15:00	16		22				38	
03:15	1		0				1		15:15	19		18				37	
03:30	1		0				1		15:30	21		24				45	
03:45	0	2	2	3			2	5	15:45	23	79	26	90			49	169
04:00	0		0				0		16:00	26		22				48	
04:15	2		1				3		16:15	16		28				44	
04:30	2		0				2		16:30	27		20				47	
04:45	3	7	2	3			5	10	16:45	20	89	36	106			56	195
05:00	3		0				3		17:00	37		33				70	
05:15	2		6				8		17:15	32		28				60	
05:30	6		6				12		17:30	30		21				51	
05:45	3	14	3	15			6	29	17:45	16	115	20	102			36	217
06:00	6		9				15		18:00	19		19				38	
06:15	4		12				16		18:15	17		16				33	
06:30	12		18				30		18:30	15		24				39	
06:45	16	38	18	57			34	95	18:45	10	61	21	80			31	141
07:00	15		20				35		19:00	13		14				27	
07:15	20		29				49		19:15	13		11				24	
07:30	15		46				61		19:30	9		9				18	
07:45	11	61	39	134			50	195	19:45	5	40	4	38			9	78
08:00	20		16				36		20:00	7		7				14	
08:15	13		15				28		20:15	3		6				9	
08:30	19		12				31		20:30	4		9				13	
08:45	10	62	23	66			33	128	20:45	6	20	7	29			13	49
09:00	12		14				26		21:00	4		11				15	
09:15	10		10				20		21:15	4		9				13	
09:30	8		10				18		21:30	2		6				8	
09:45	11	41	16	50			27	91	21:45	4	14	6	32			10	46
10:00	7		18				25		22:00	3		4				7	
10:15	10		9				19		22:15	2		7				9	
10:30	10		13				23		22:30	0		2				2	
10:45	12	39	9	49			21	88	22:45	5	10	3	16			8	26
11:00	10		14				24		23:00	2		1				3	
11:15	7		13				20		23:15	2		4				6	
11:30	7		7				14		23:30	0		2				2	
11:45	14	38	13	47			27	85	23:45	2	6	2	9			4	15
TOTALS		310		431				**741**	**TOTALS**		617		680				**1297**
SPLIT %		41.8%		58.2%				**36.4%**	**SPLIT %**		47.6%		52.4%				**63.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	927	1,111	0	0	2,038

AM Peak Hour	06:45	07:00	**07:15**	**PM Peak Hour**	16:45	16:45	**16:45**
AM Pk Volume	66	134	**196**	**PM Pk Volume**	119	118	**237**
Pk Hr Factor	0.825	0.728	**0.803**	**Pk Hr Factor**	0.804	0.819	**0.846**
7 - 9 Volume	123	200	**323**	**4 - 6 Volume**	204	208	**412**
7 - 9 Peak Hour	07:15	07:00	**07:15**	**4 - 6 Peak Hour**	16:45	16:45	**16:45**
7 - 9 Pk Volume	66	134	**196**	**4 - 6 Pk Volume**	119	118	**237**
Pk Hr Factor	0.825	0.728	**0.803**	**Pk Hr Factor**	0.804	0.819	**0.846**

Prepared by NDS/ATD

VOLUME

Clinton Ave Bet. Grantland & Bryan Ave

Day: Thursday
Date: 3/8/2018

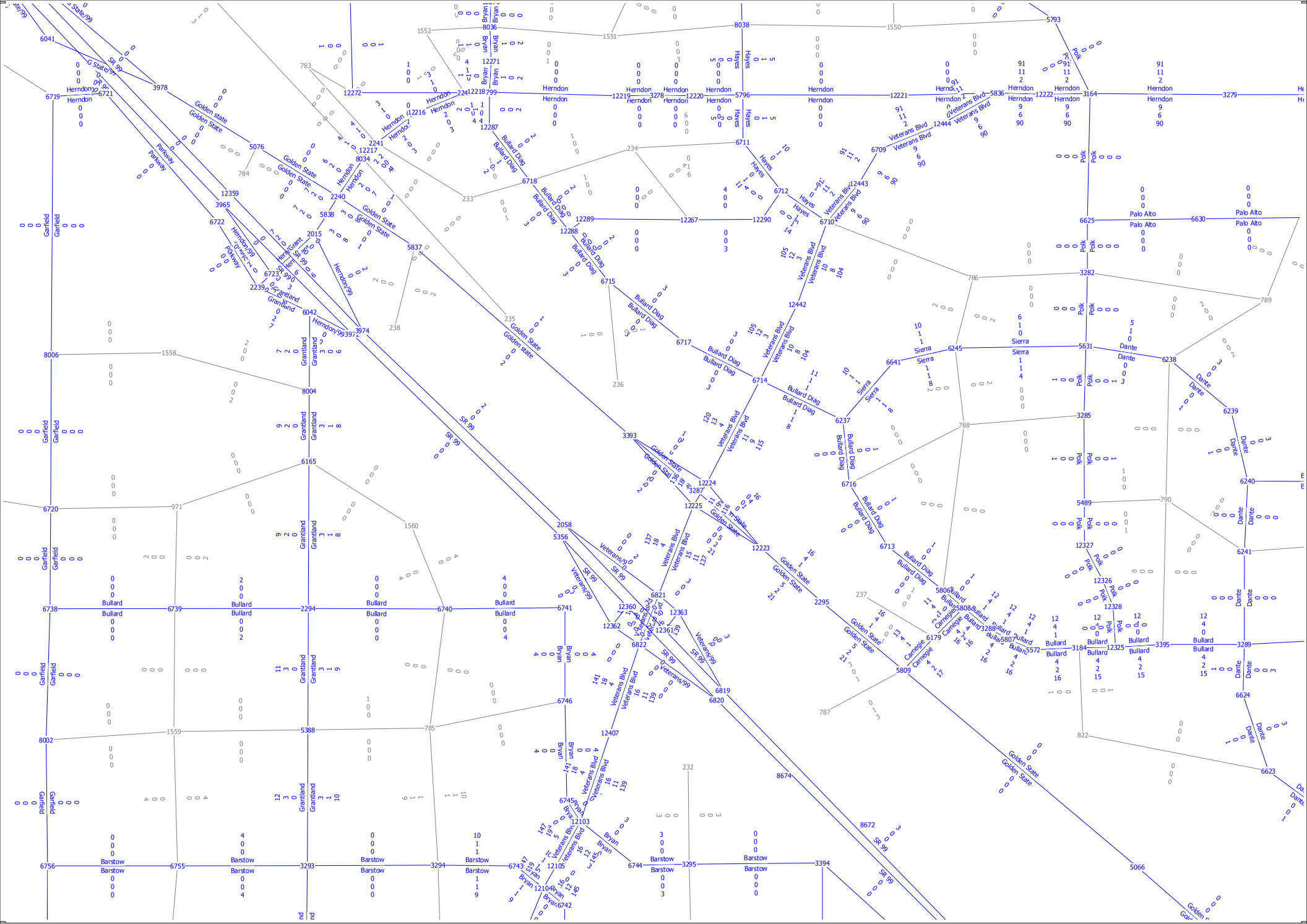
City: Fresno
Project #: CA18_2030_007

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	222	258	480

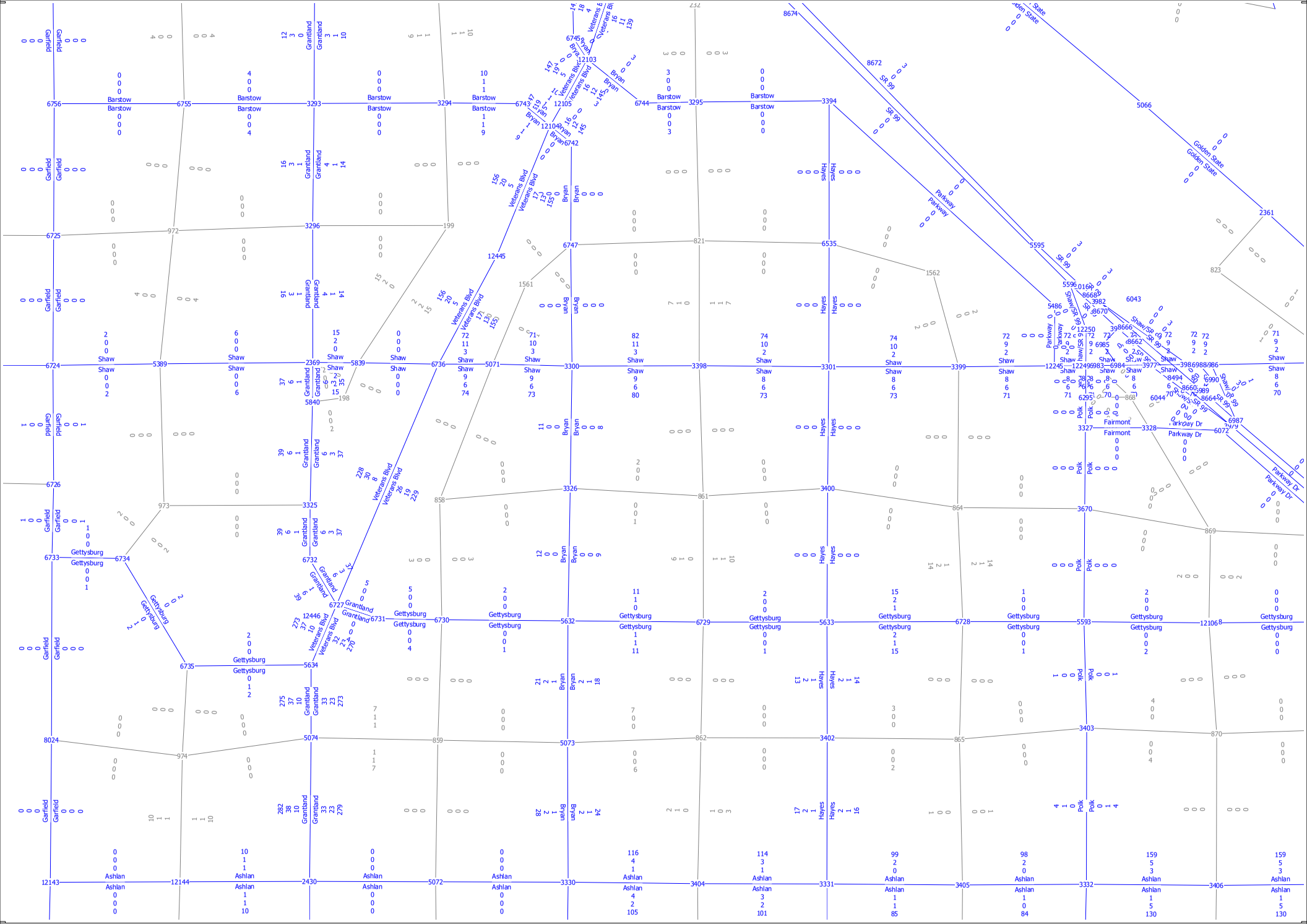
AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			1		0		1		12:00			1		5		6	
00:15			1		0		1		12:15			7		6		13	
00:30			1		0		1		12:30			5		5		10	
00:45			0	3	0		0	3	12:45			1	14	4	20	5	34
01:00			0		0		0		13:00			2		7		9	
01:15			0		0		0		13:15			1		6		7	
01:30			0		0		0		13:30			4		10		14	
01:45			0		0		0		13:45			2	9	1	24	3	33
02:00			0		0		0		14:00			4		7		11	
02:15			0		0		0		14:15			4		6		10	
02:30			1		0		1		14:30			4		4		8	
02:45			2	3	0		2	3	14:45			3	15	5	22	8	37
03:00			0		0		0		15:00			5		6		11	
03:15			0		0		0		15:15			4		8		12	
03:30			0		0		0		15:30			4		8		12	
03:45			0		0		0		15:45			6	19	9	31	15	50
04:00			0		0		0		16:00			10		7		17	
04:15			1		1		2		16:15			2		5		7	
04:30			0		1		1		16:30			6		7		13	
04:45			0	1	0	2	0	3	16:45			6	24	5	24	11	48
05:00			1		0		1		17:00			7		6		13	
05:15			0		0		0		17:15			4		6		10	
05:30			0		1		1		17:30			6		3		9	
05:45			0	1	0	1	0	2	17:45			5	22	5	20	10	42
06:00			1		0		1		18:00			4		3		7	
06:15			5		1		6		18:15			2		1		3	
06:30			2		3		5		18:30			4		6		10	
06:45			4	12	3	7	7	19	18:45			6	16	4	14	10	30
07:00			1		4		5		19:00			2		1		3	
07:15			4		6		10		19:15			3		4		7	
07:30			2		4		6		19:30			1		2		3	
07:45			8	15	6	20	14	35	19:45			3	9	2	9	5	18
08:00			3		5		8		20:00			0		1		1	
08:15			4		5		9		20:15			3		1		4	
08:30			4		1		5		20:30			1		0		1	
08:45			1	12	2	13	3	25	20:45			3	7	0	2	3	9
09:00			3		1		4		21:00			1		1		2	
09:15			3		0		3		21:15			1		0		1	
09:30			2		4		6		21:30			0		2		2	
09:45			5	13	2	7	7	20	21:45			2	4	5	8	7	12
10:00			0		5		5		22:00			2		2		4	
10:15			1		3		4		22:15			1		2		3	
10:30			3		5		8		22:30			0		1		1	
10:45			2	6	3	16	5	22	22:45			2	5	1	6	3	11
11:00			4		2		6		23:00			0		0		0	
11:15			3		4		7		23:15			1		2		3	
11:30			1		1		2		23:30			0		1		1	
11:45			3	11	2	9	5	20	23:45			0	1	0	3	0	4
TOTALS				77		75		**152**	**TOTALS**				145		183		**328**
SPLIT %				50.7%		49.3%		**31.7%**	**SPLIT %**				44.2%		55.8%		**68.3%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	222	258	480

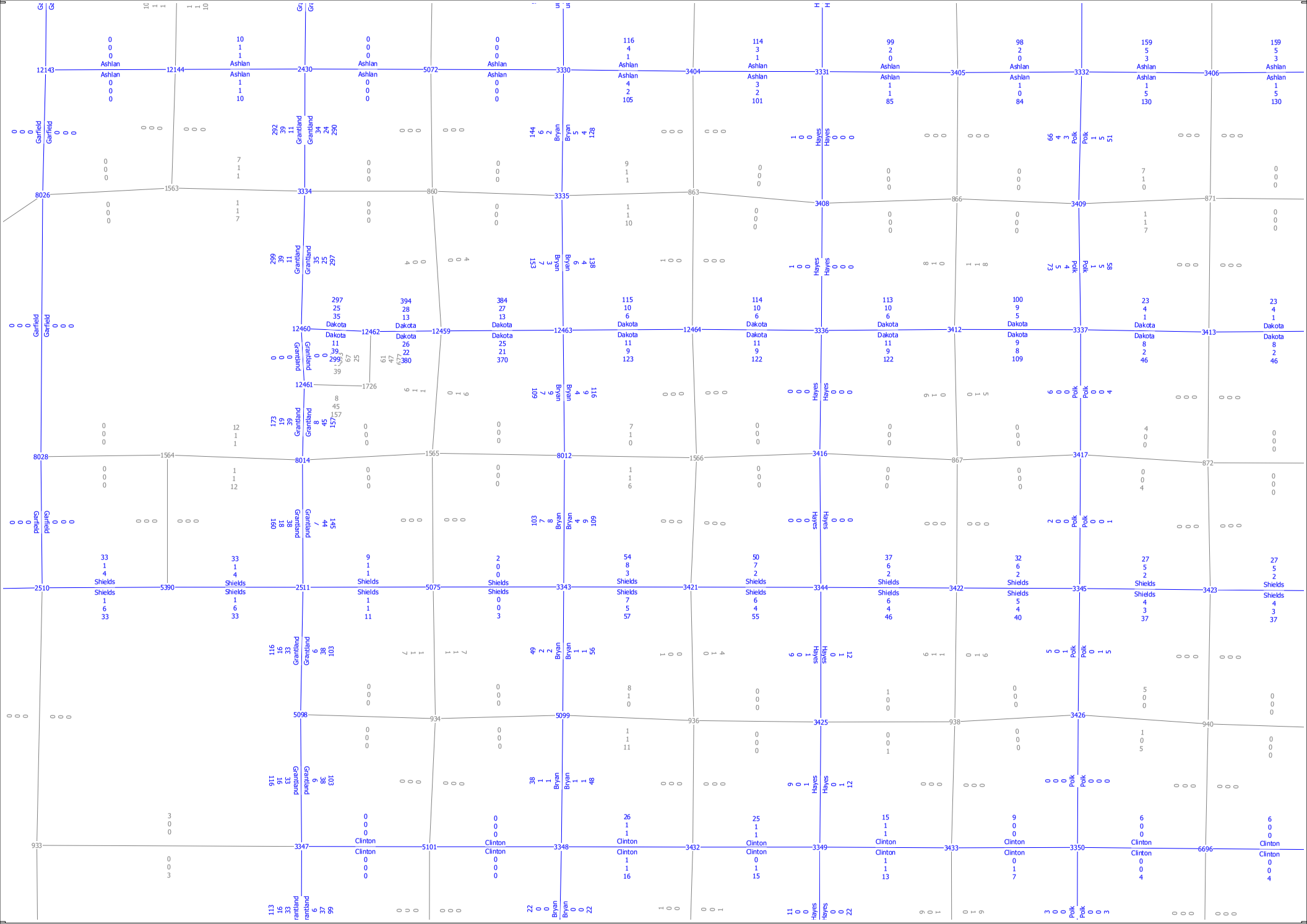
AM Peak Hour	07:45	07:15	**07:15**	**PM Peak Hour**	15:15	15:15	**15:15**
AM Pk Volume	19	21	**38**	**PM Pk Volume**	24	32	**56**
Pk Hr Factor	0.594	0.875	**0.679**	**Pk Hr Factor**	0.600	0.889	**0.824**
7 - 9 Volume	27	33	**60**	**4 - 6 Volume**	46	44	**90**
7 - 9 Peak Hour	07:45	07:15	**07:15**	**4 - 6 Peak Hour**	16:00	16:00	**16:00**
7 - 9 Pk Volume	19	21	**38**	**4 - 6 Pk Volume**	24	24	**48**
Pk Hr Factor	0.594	0.875	**0.679**	**Pk Hr Factor**	0.600	0.857	**0.706**



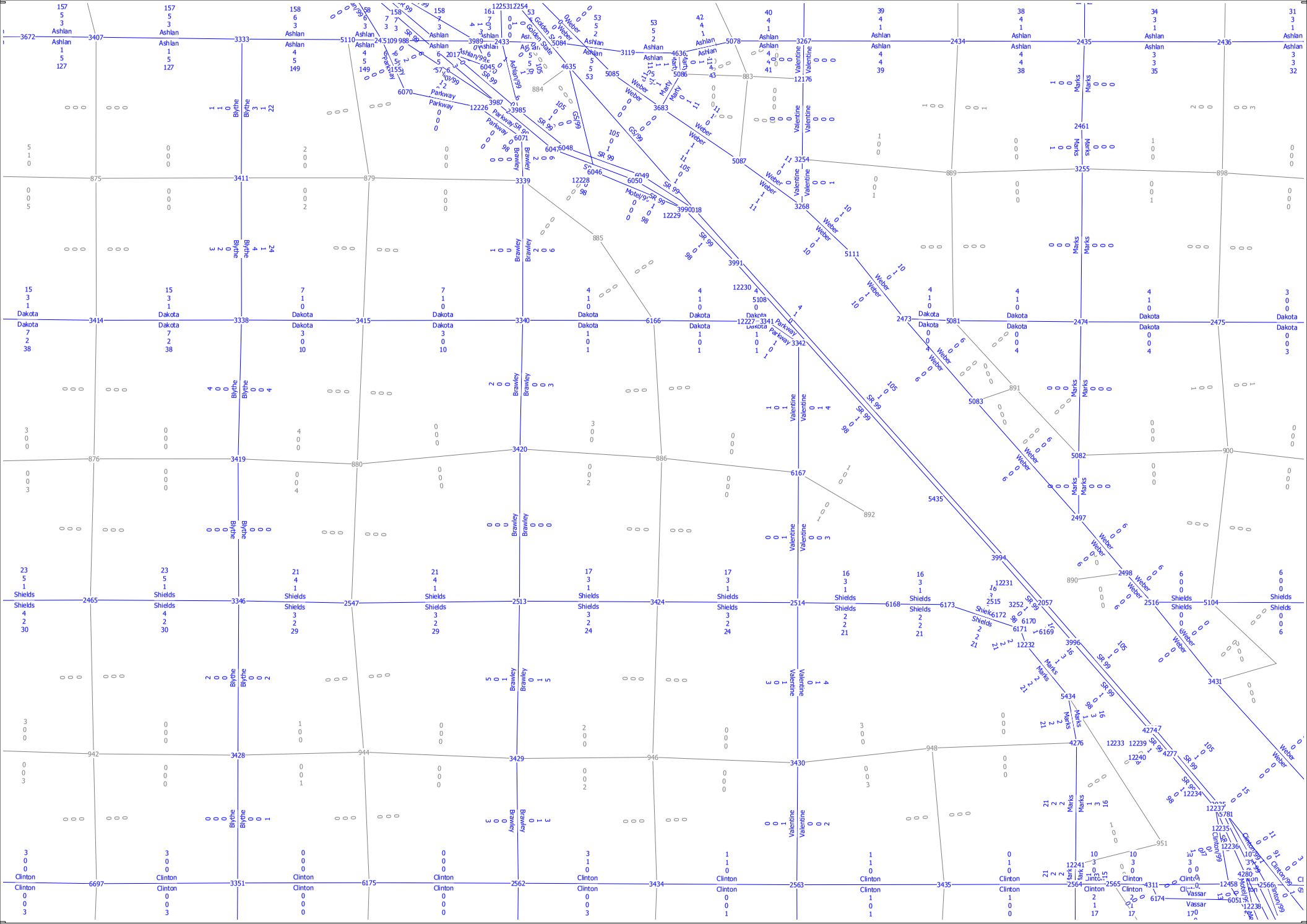
Tract 6237 at SEC Dakota and Grantland (180-Single-Family Units)
Select Zone
AM, PM and Daily



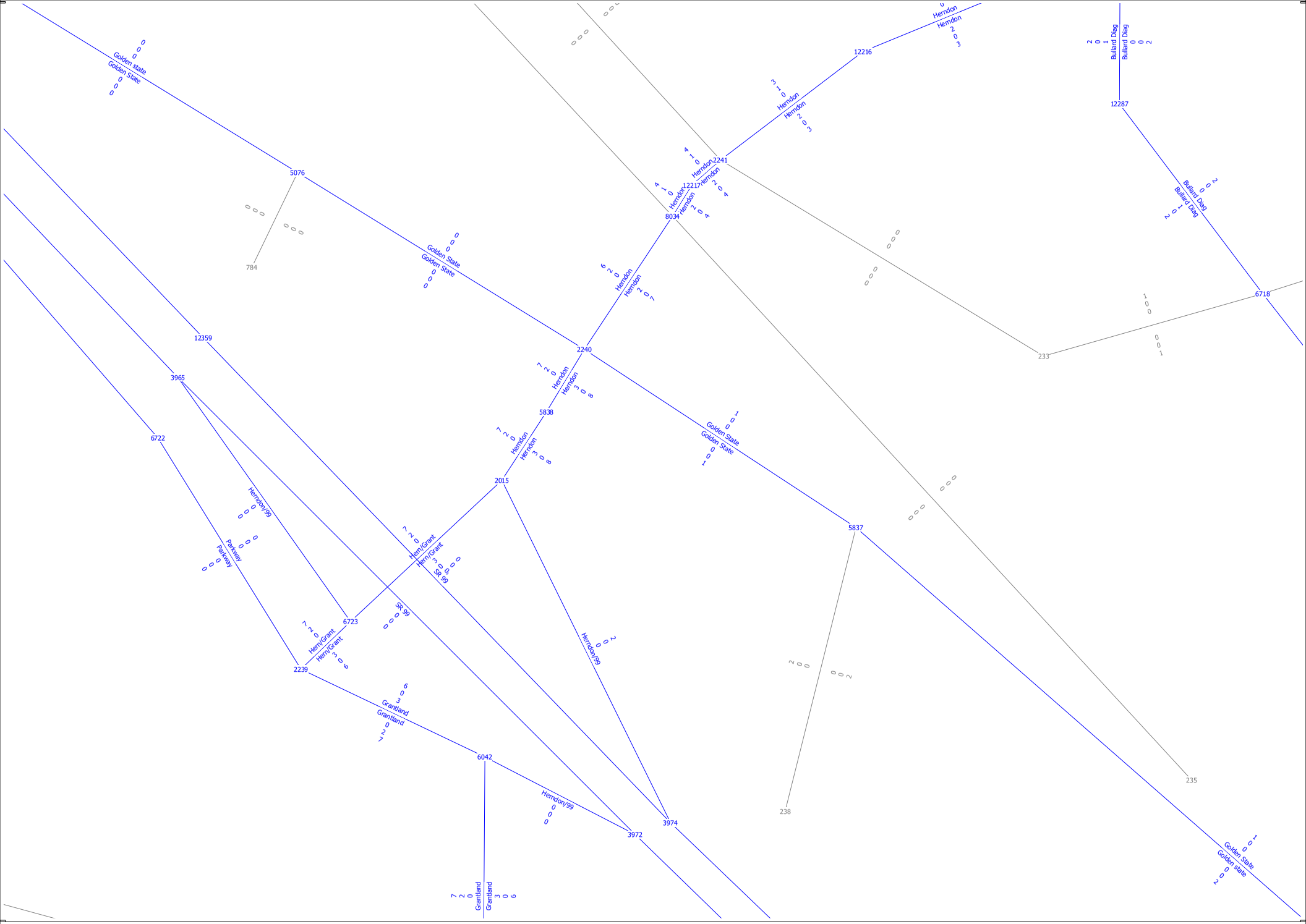
Tract 6237 at SEC Dakota and Grantland (180-Single-Family Units)
Select Zone
AM, PM and Daily



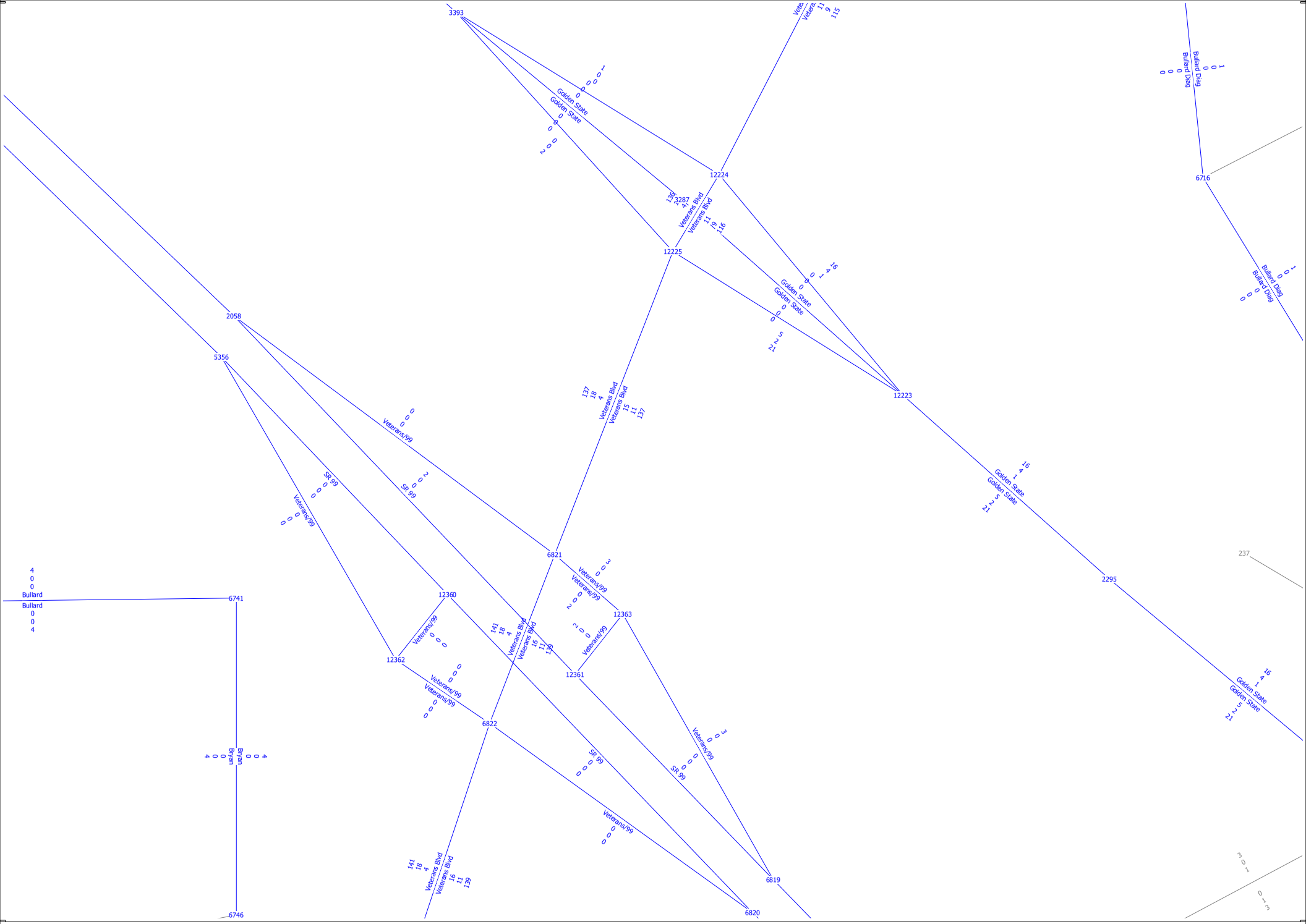
Tract 6237 at SEC Dakota and Grantland (180-Single-Family Units)
Select Zone
AM, PM and Daily



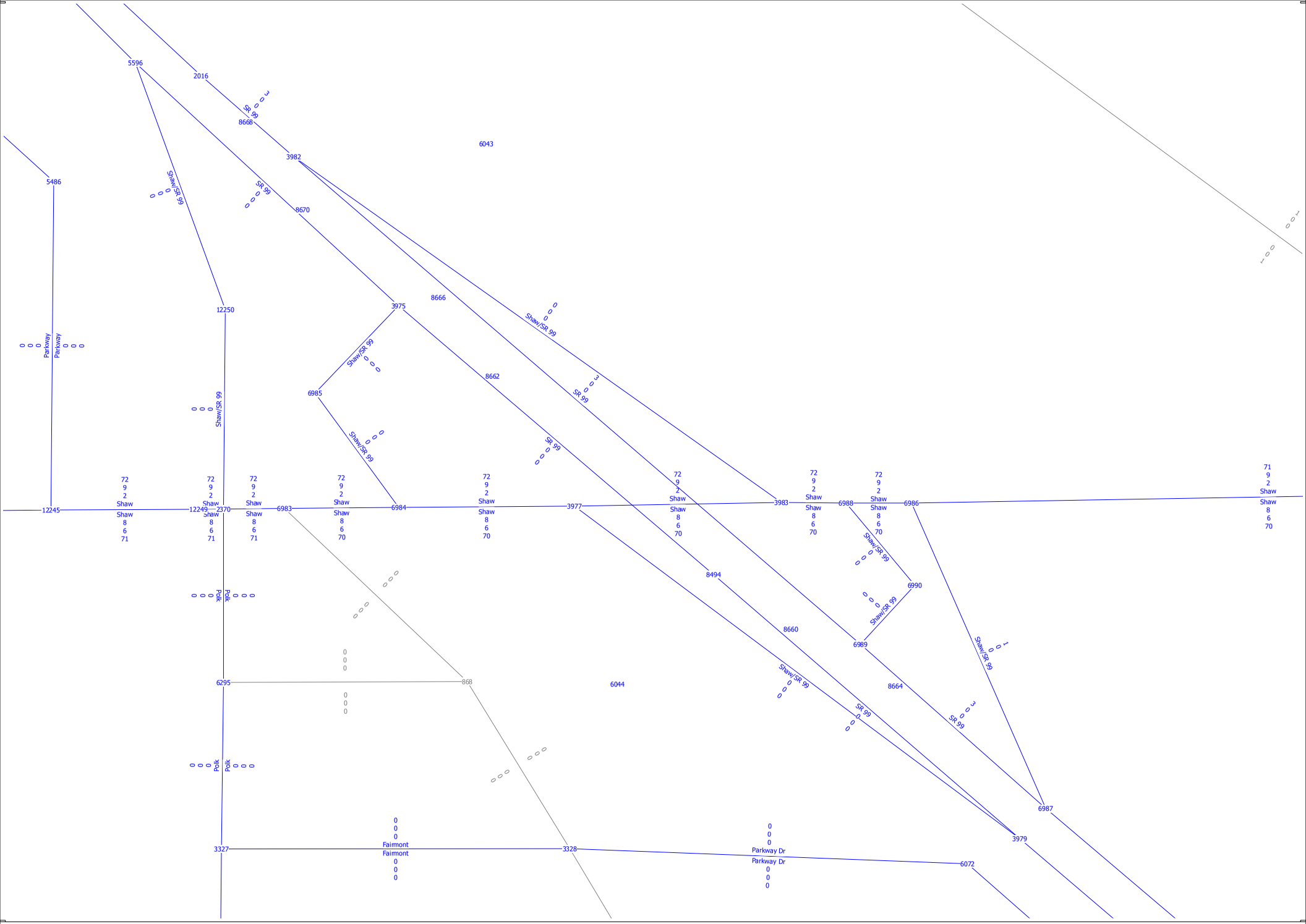
Tract 6237 at SEC Dakota and Grantland (180-Single-Family Units)
Select Zone
AM, PM and Daily



Tract 6237 at SEC Dakota and Grantland (180-Single-Family Units)
Select Zone
AM, PM and Daily

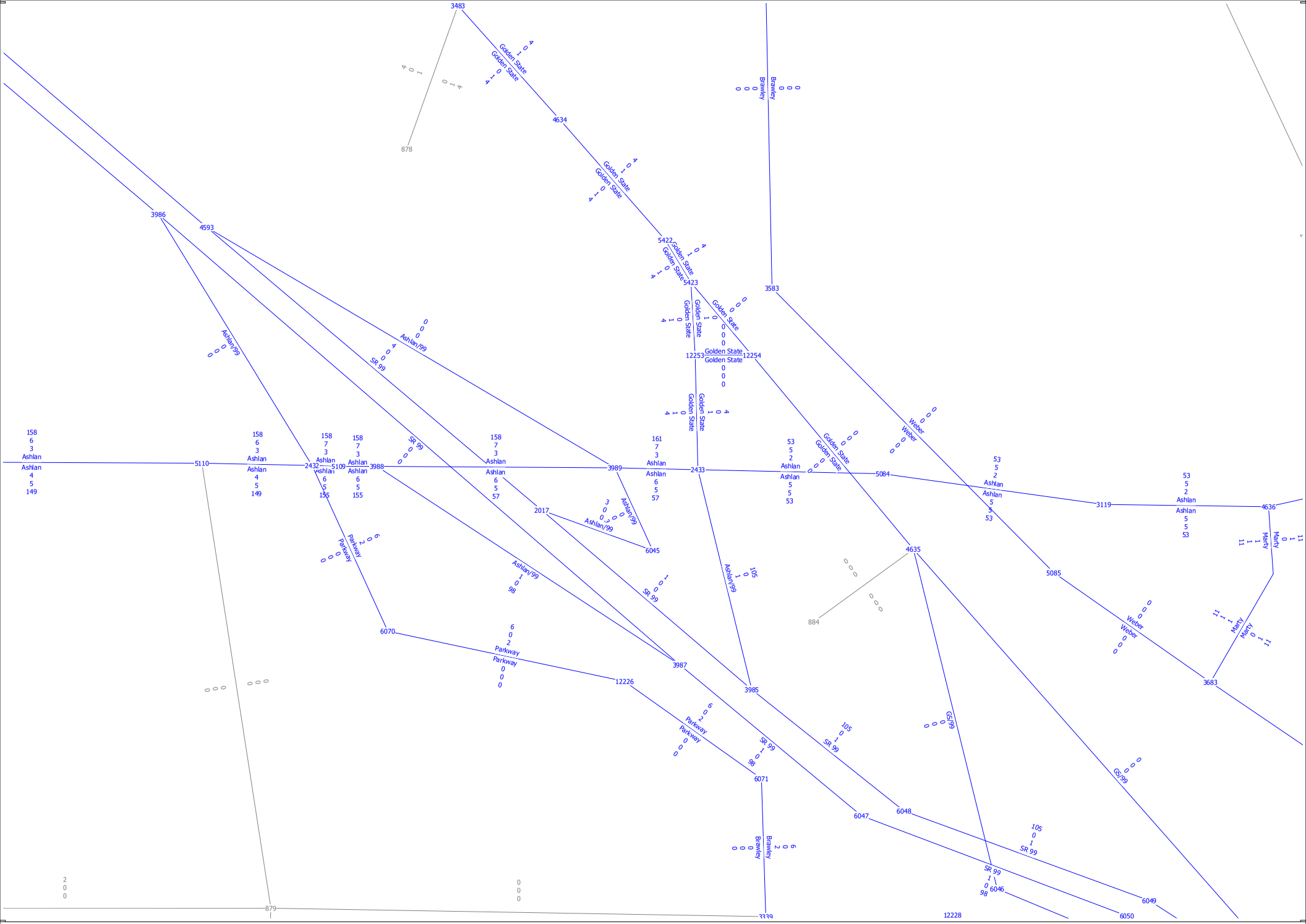


Tract 6237 at SEC Dakota and Grantland (180-Single-Family Units)
Select Zone
AM, PM and Daily



Tract 6237 at SEC Dakota and Grantland (180-Single-Family Units)
Select Zone
AM, PM and Daily

cube



Tract 6237 at SEC Dakota and Grantland (180-Single-Family Units)
Select Zone
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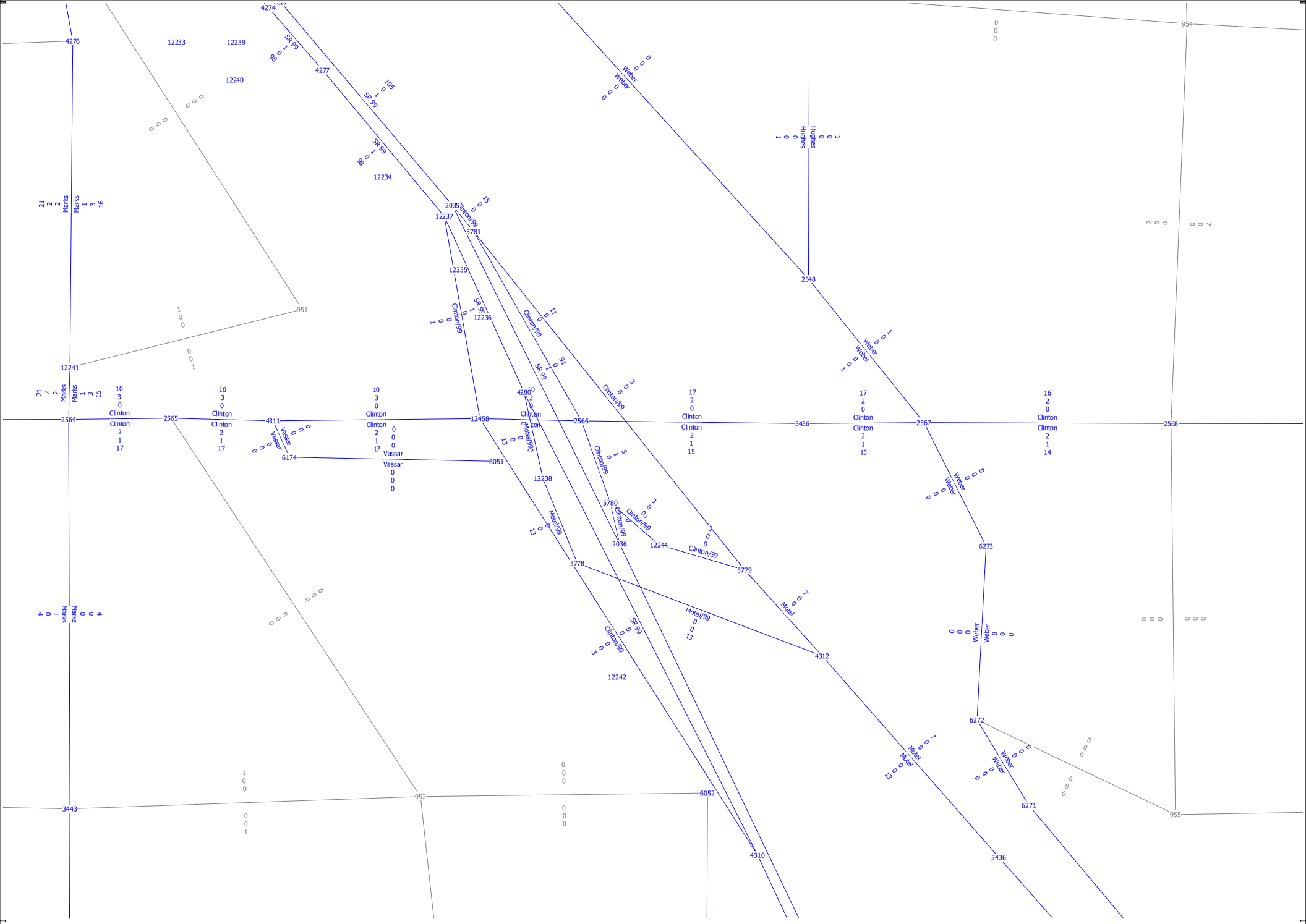
cube



Tract 6237 at SEC Dakota and Grantland (180-Single-Family Units)
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